

CIVIL DISTRICT COURT  
PARISH OF ORLEANS  
STATE OF LOUISIANA

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GLORIA SCOTT AND \*  
DEANIA JACKSON, \*  
\* NO. 96-8461  
VERSUS \* DIVISION "I"  
\* SECTION 14  
\*  
THE AMERICAN TOBACCO \*  
COMPANY, INC., ET AL. \*

Transcript of proceedings before the  
Honorable Richard J. Ganucheau, Judge Pro Tempore,  
Civil District Court, Parish of Orleans, State of  
Louisiana, 421 Loyola Avenue, New Orleans, Louisiana  
70112, commencing on June 18, 2001.

\* \* \* \* \*  
Wednesday Morning Session  
May 7, 2003  
9:40 a.m.  
\* \* \* \* \*

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20111

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20114

Wednesday Morning Session

May 7, 2003

9:40 a.m.

\* \* \* \* \*

P R O C E E D I N G S

\* \* \* \* \*

(In open court with a jury present:)

9:40 a.m.

THE COURT:

Good morning.

Doctor, you are still under oath. Do  
you understand that?

THE WITNESS:

I do, Your Honor.

THE COURT:

Okay. Mr. Belasic, are you ready to  
continue?

MR. BELASIC:

Yes, I am. Good morning, everybody.

-- -- --

DAVID E. TOWNSEND, Ph.D.

being previously duly sworn by the Clerk, testifies  
and says as follows:

-- -- --

DIRECT EXAMINATION (Continued)

BY MR. BELASIC:

Q. Dr. Townsend, when with left off you had told  
the jury about the Premier cigarette, the research  
that showed the reduction in cancer compounds, and  
you talked then about the successor cigarette, the  
cigarette that followed Premier, and what was that  
cigarette called again?

20115

1 A. That is Eclipse cigarettes.

2 Q. Did you bring a pack of the Eclipse  
3 cigarettes with you today?

4 A. Yes, I did.  
5 MR. BELASIC:  
6 Kendal, if you could find those,  
7 would you show that to the jury or hold it  
8 up?  
9 A. Hold it up? Yes.  
10 MR. BELASIC:  
11 Your Honor, at this point we would  
12 move to admit that pack of Eclipse  
13 cigarettes. It's Exhibit No. AS-000486.  
14 MR. BENCOMO:  
15 No objection, Your Honor.  
16 THE COURT:  
17 It will be received in evidence.  
18 BY MR. BELASIC:  
19 Q. Now, you said yesterday that Eclipse was sort  
20 of a new and improved Premier?  
21 A. It is.  
22 After Premier failed in the marketplace, we  
23 undertook immediately a development project to try  
24 to improve the taste and the overall consumer  
25 acceptance that ultimately became Eclipse.  
26 Q. What type of research, if anything, did  
27 Reynolds do to develop this new and improved  
28 product?  
29 A. Well, if you remember, in the Premier product  
30 we did not burn tobacco, we only heated tobacco.  
31 And part of what we heard from consumers in the test  
32 market was the poor taste qualities of Premier.

20116

1 So in the Eclipse project, the goal was to  
2 try to burn a very, very small and controllable  
3 amount of tobacco to give some taste, to make the  
4 taste better, but still keep that amount of tobacco  
5 that is burned so low that there still is major  
6 chemistry reductions and major biology reductions.  
7 Q. So can you outline for us the similarities  
8 and the differences between Eclipse and Premier so  
9 the jury will understand?  
10 A. Yes, sure.  
11 Basically, if you remember the Premier, it  
12 was a very complicated design that had a heat  
13 source, a carbon fuel heat source. That is also in  
14 Eclipse.  
15 But we have taken out the aluminum capsule  
16 and the substrate. You remember those little beads  
17 that were inside the aluminum capsule, we have taken  
18 that out and replaced it with a bit of highly  
19 processed tobacco.  
20 Then there is a second bed of highly  
21 processed tobacco, both of which are intended to  
22 give flavor, to deliver a little bit of nicotine in  
23 the smoke of the Premier. It also -- I'm sorry, of  
24 the Eclipse.  
25 It also includes a fairly high level of  
26 glycerin also to help form smoke, because if you  
27 remember, glycerin is a primary smoke former that's  
28 a relatively inert or innocuous material.  
29 Now, in Eclipse we did place a very small and  
30 controllable amount of tobacco to be burned. There  
31 is a small amount in -- actually in the heat source,  
32 the carbon. So it's mixed in with the carbon.

20117

1 And then there is a very small piece of  
2 reconstituted tobacco paper that's wrapped around  
3 the heat source. So when that burns, it will burn  
4 that small piece of paper and the carbon that's in  
5 there.  
6 Q. What was the reason that you put this small  
7 amount of tobacco in Eclipse when you didn't do it  
8 with Premier?  
9 A. To improve the taste characteristics, to give  
10 it more normal tobacco taste, to try to improve  
11 consumer acceptance.  
12 But again the goal was to keep that amount of  
13 tobacco low so that there are still major reductions  
14 in chemistry and biology.  
15 Q. Now, did R. J. Reynolds do similar scientific  
16 tests on Eclipse that you did on Premier?  
17 A. Yes, we did.  
18 Q. Could you tell the jury what types of  
19 scientific tests you ran on the Eclipse cigarette?  
20 A. Sure. We did extensive chemistry looking at  
21 the smoke composition, looking at a number of  
22 different compounds that are in smoke that the  
23 public health community and others have looked at as  
24 possible reasons why smoking is risky.  
25 So we did extensive chemistry, we did  
26 extensive biology, both in laboratory studies which  
27 we call in vitro studies, looking at a variety of  
28 different assays, then also we conducted studies  
29 with animals, both inhalation tests and skin  
30 painting tests.  
31 We conducted extensive tests actually with  
32 smokers, looking at the effects of switching to

20118

1 Eclipse on certain end points in real smokers.  
2 Q. Do you remember when Mr. Bencomo asked you  
3 questions about the four-step testing process?  
4 A. Yes.  
5 Q. Did you follow that for the Eclipse  
6 cigarette?  
7 A. Yes, we did.  
8 And again the four step is extensive  
9 chemistry evaluation, extensive biology evaluation,  
10 study with humans, and then finally the fourth step  
11 is external review by experts.  
12 Q. Now, did you personally have any involvement  
13 in any of those scientific testing steps?  
14 A. Yes. For Eclipse I was responsible for the  
15 analytical chemistry portion at that time.  
16 Q. And have you prepared a demonstrative that  
17 will show the results of those tests?  
18 A. Yes.

19 MR. BELASIC:

20 Your Honor, we ask to put up DDA-628.

21 BY MR. BELASIC:

22 Q. And can you identify this for us, Doctor?  
23 A. Yes. This is a chart showing the  
24 construction of Eclipse, and also some of the  
25 reductions observed in chemistry.  
26 Q. And does it summarize or does it fairly and  
27 accurately summarize the results of the scientific  
28 research on Eclipse?  
29 A. Yes.  
30 Q. Would it help you in explaining what those

31 results were to the jury?

32 A. Yes.

20119

1 MR. BELASIC:

2 Your Honor, may we publish?

3 MR. BENCOMO:

4 No objection, Your Honor.

5 THE COURT:

6 You may publish.

7 BY MR. BELASIC:

8 Q. Would you tell the jury what this  
9 demonstrative shows?

10 A. Yes. First of all, in the top half is a  
11 cutaway of the Eclipse product as I have already  
12 described it.

13 The bottom half is a table showing some of  
14 the chemistry reductions that were observed for  
15 Eclipse. This is only some of the reductions.

16 At the top you will see again the  
17 construction. Again, a heat source, we have  
18 replaced the aluminum capsule with a tobacco bed of  
19 highly processed tobacco.

20 Then there is a second bed in the filter  
21 section, and then a small mouthpiece filter that  
22 actually has a hole down the middle so there is  
23 really very or essentially no removal efficiency by  
24 that mouthpiece filter.

25 Now, if you turn to the table, you will see  
26 major reductions. Even though we are burning a  
27 small amount of tobacco in the heat source and  
28 around the heat source, there are still major  
29 reductions in the chemistry.

30 Looking at, for example, benzpyrene, a  
31 compound we talked about yesterday, about a 90  
32 percent reduction.

20120

1 Benzene, a compound that's thought to be a  
2 human carcinogen, about 89 percent reduction.

3 Carbonyls, which includes aldehydes we talked  
4 about yesterday, about 80 percent and so forth.

5 Nitrosamines we talked about, about an 84  
6 percent reduction.

7 NOx, 84 percent.

8 Q. Now, are all those compounds compounds that  
9 are thought to be carcinogenic as related to cancer  
10 in either animal testing or in humans?

11 A. They are not all thought to be carcinogenic.  
12 Some are thought to be toxic in different ways.

13 But certainly, for example, benzpyrene is  
14 thought to be certainly an animal carcinogen.  
15 Benzene is thought to be a human carcinogen. Some  
16 of the nitrosamines are thought to be potential  
17 carcinogens.

18 Q. And with regard to those compounds, Eclipse  
19 reduced them by 80 to 90 percent?

20 A. Yes, that's correct.

21 Q. And that was similar to the reductions in  
22 Premier?

23 A. Yes. Slightly less reduction, but still  
24 major.

25 Q. Okay.

26 MR. BELASIC:

27 We can take that down.

28 BY MR. BELASIC:

29 Q. Now, did you also do biological testing on  
30 Eclipse?

31 A. Yes. We did extensive biological testing.

32 Q. As head of R&D, are you familiar with the

20121

1 results of that biological testing?

2 A. Yes.

3 Q. Would you tell the jury what the results  
4 were?

5 A. We saw major reductions in the in vitro or  
6 laboratory tests that we conducted, which included  
7 cytotoxicity tests, genotoxicity tests, things like  
8 the Ames test, major reductions.

9 When we turn to animal studies, we saw a  
10 major reduction in mouse skin painting,  
11 tumorigenicity. That's where you paint the smoke on  
12 the backs of mice and see how many and what types of  
13 tumors developed. So a major reduction in that.

14 We saw major reduction in the results of the  
15 inhalation studies with animals.

16 And all together, there was significant  
17 biological test reductions.

18 Q. And who did the biological tests?

19 A. Most of the biological -- the laboratory  
20 biological tests were conducted in-house at R. J.  
21 Reynolds. We did contract out some testing in some  
22 cases to replicate what we did in-house to get  
23 confirmation of our results.

24 Q. Just to be clear, you were doing in-house  
25 biological testing at Reynolds on a product that you  
26 sell commercially?

27 A. Yes, of course.

28 Q. Now, what about the tests conducted on  
29 smokers that you mentioned? What do they show?

30 A. There were a number of tests conducted with  
31 smokers. And for those we actually went out to  
32 research laboratories, primarily at universities,

20122

1 like the University of Nebraska did an extensive  
2 test, we contracted some research at Tulane,  
3 University of British Columbia, and a number of  
4 other places. And we did some work in-house.

5 One of the results that we found with smokers  
6 is a major reduction in urine mutagenicity. So the  
7 biological activity or the mutagenic activity of  
8 urine from smokers who switched to Eclipse was  
9 greatly reduced, which indicates a reduced exposure  
10 to mutagens.

11 For example, in the Nebraska study, also  
12 there were studies done that looked at irritation in  
13 the lung and actually showed a major reduction in  
14 lung irritation, which is thought to be related to  
15 cancer formation.

16 And samples were taken from the lung to  
17 actually analyze and show again reduced irritation.  
18 There was also some research done looking at DNA  
19 adduct formation in those samples.

20 Q. I think you mentioned yesterday Eclipse is on  
21 the market today?

22 A. Yes, it is.

23 Q. And is it beginning to be rolled out  
24 nationwide?



25 A. Yes. Actually it's been in test market in  
26 several cities for some time, and it's now in the  
27 process of going to a national but -- somewhat  
28 limited but national distribution. So it is going  
29 out to certain convenience stores.  
30 Q. And that includes Louisiana?  
31 A. Includes Louisiana, and all of Louisiana  
32 including New Orleans.

20123

1 Q. Would it have been possible to develop the  
2 Eclipse cigarette any earlier?  
3 A. No, I don't think so, in part because of the  
4 science that we learned from Premier, the  
5 construction materials, the approach that we took  
6 with Premier. I don't think it would have been  
7 possible at all.  
8 Q. Doctor, yesterday when I talked about the  
9 three topics, I think we have gone through the first  
10 two and I want to turn to the third topic, and that  
11 is cigarette design and the FTC test method.  
12 It's been a couple of months since the jury  
13 has heard about the FTC test method. Could you just  
14 briefly remind us what the FTC test method is and  
15 how it works?  
16 A. Sure. The FTC test method measures tar,  
17 nicotine and carbon monoxide. It's an arbitrary  
18 laboratory smoking method where you have a smoking  
19 machine that puffs in a certain way.  
20 In the prescription of how to do this, there  
21 are quite a few different rules. You have to  
22 condition the cigarettes a certain way, the  
23 cigarettes have to be smoked down to a certain  
24 point, the cigarette is inserted into the smoking  
25 machine only to a certain point.  
26 So it's a very tightly controlled protocol,  
27 and it will measure tar, nicotine and carbon  
28 monoxide that can be used for relative comparisons.  
29 Q. And do you know how they picked the smoking  
30 parameters, the amount of puffs, the amount of smoke  
31 that would be taken in by this machine?  
32 A. Actually, the puffing characteristics were

20124

1 chosen quite a few years ago, back in the '60s,  
2 based on work that was done then and even much  
3 earlier where they, for example, went out and  
4 actually watched people smoke cigarettes in their  
5 normal course of the day, and tried to count how  
6 many puffs they took, for example.  
7 They went and examined spent filters from the  
8 ashtray and tried to examine how far down they  
9 smoked it.  
10 And then there were some trying to estimate  
11 what type of puff volume, how big a puff volume  
12 people took.  
13 And then they still came up with a relatively  
14 arbitrary but based on those observations set of  
15 conditions.  
16 Q. Is Reynolds required to test its cigarettes  
17 by the Federal Trade Commission's test method?  
18 A. Reynolds and all of our competitors are  
19 required to test by the Federal Trade Commission and  
20 report the results in advertising and report their  
21 results to the Federal Trade Commission.

22 Q. And for how long have tobacco companies been  
23 required to test by the FTC method and to put it in  
24 advertisements?  
25 A. Since 1967.  
26 Q. Now, does this Federal Trade Commission and  
27 its smoking machine, its method, does it predict the  
28 amount of tar and nicotine that an individual smoker  
29 might get?  
30 A. No, it doesn't. It does not predict what any  
31 individual will get, and it was frankly never  
32 intended to.

20125

1 I think the Federal Trade Commission knew  
2 very well that fact when it established the method  
3 in 1967.  
4 Q. Now, was the fact that the FTC method didn't  
5 predict what a smoker got, was that a secret?  
6 A. No, it wasn't a secret at all. In fact, the  
7 Federal Trade Commission when they published the  
8 method in 1967 made it very clear that it was --  
9 that it does not represent what an individual gets,  
10 nor was it intended to. It was intended to provide  
11 a relative comparison.  
12 And tobacco companies, including R. J.  
13 Reynolds, provided comments on the proposed rule to  
14 the Federal Trade Commission prior to them setting  
15 that rule, and made it clear that the test method  
16 does not represent what any individual actually  
17 gets.  
18 Q. When were these Federal Trade Commission  
19 hearings held on this FTC test method?  
20 A. 1966.  
21 Q. Let's talk about those.  
22 MR. BELASIC:  
23 Your Honor, we would like to call up  
24 Exhibit AZ-008520.  
25 MR. RUSS HERMAN:  
26 May it please the Court? I don't  
27 have an objection. I just wanted to note  
28 for the record, maybe we can clear this up  
29 later, I think all of these demonstratives  
30 have had 000 numbers, even though  
31 sometimes they have only been identified  
32 by three numbers.

20126

1 THE COURT:  
2 My notes reflect exactly that,  
3 Mr. Herman, and that does clear up the  
4 record, except the last one which has two  
5 zeros.  
6 MR. RUSS HERMAN:  
7 Except the last one. Perhaps we can  
8 stipulate that all of these have three  
9 zeros in front of them so the record is  
10 clear. Is that all right?  
11 MR. BELASIC:  
12 That's fine.  
13 MR. RUSS HERMAN:  
14 Thank you.  
15 BY MR. BELASIC:  
16 Q. Do you see that the document in front of you  
17 says Before the Federal Trade Commission, Cigarettes  
18 and Related Matters?

19 A. Yes.  
20 Q. Are these the industry comments, the tobacco  
21 company comments to the FTC that you are talking  
22 about?  
23 A. Yes.  
24 Q. And they were given in 1966?  
25 A. Yes.  
26 MR. BELASIC:  
27 Your Honor, may we publish?  
28 MR. BENCOMO:  
29 No objection, Your Honor.  
30 THE COURT:  
31 You may publish.  
32 MR. BELASIC:

20127

1 Could we turn to page four of the  
2 document, please? It's actually the fifth  
3 page.  
4 May we publish, Your Honor? I'm  
5 sorry.  
6 THE COURT:  
7 I indicated that you may publish,  
8 yes.  
9 BY MR. BELASIC:  
10 Q. Now, Dr. Townsend, here we are looking at the  
11 last page of the industry's submission to the  
12 Federal Trade Commission. Do you see the date is  
13 November 28, 1966?  
14 A. That's right.  
15 Q. And do you see there that it is signed by  
16 American Tobacco Company, B&W, Philip Morris,  
17 Reynolds, et cetera?  
18 A. Yes.  
19 MR. BELASIC:  
20 Could you highlight the third full  
21 paragraph, Bert.  
22 BY MR. BELASIC:  
23 Q. And could you read what the tobacco companies  
24 told the Federal Trade Commission about their test  
25 method?  
26 A. Sure.  
27 Whatever procedures are adopted by  
28 the commission, the results will apply  
29 only to that particular set of test  
30 conditions and will not necessarily  
31 indicate relative smoke yields to any  
32 particular smoker in view of the wide

20128

1 variety of smoking patterns followed by  
2 individual smokers.  
3 Q. Now, that was a true statement, wasn't it?  
4 A. Yes.  
5 Q. So there is no question that the FTC was  
6 informed that their own method wouldn't be able to  
7 predict individual smokers' intake?  
8 A. That's right.  
9 Q. And it was the tobacco companies who told  
10 them?  
11 A. Yes.  
12 MR. BELASIC:  
13 Could we take that down then, Bert,  
14 and could you put up for the Judge and the  
15 attorneys AS-525? I didn't say the zeros.

16 BY MR. BELASIC:  
17 Q. Do you see that document, Dr. Townsend?  
18 A. I do.  
19 Q. Is this the FTC's own press release in 1967  
20 that you referred to?  
21 A. Yes, it is.  
22 MR. BELASIC:  
23 Your Honor, may we publish?  
24 MR. BENCOMO:  
25 No objection.  
26 THE COURT:  
27 You may publish.  
28 BY MR. BELASIC:  
29 Q. Now, this was the FTC's announcement to the  
30 public; correct? This was not an internal document?  
31 A. To the public. This is a press release.  
32 Q. This is the press release that they gave to

20129

1 be reported in newspapers, magazines, whatever;  
2 correct?  
3 A. That's right.  
4 MR. BELASIC:  
5 Bert, could you highlight the portion  
6 at the bottom, and blow that up?

7 BY MR. BELASIC:  
8 Q. Doctor, could you read for us what the  
9 Federal Trade Commission publicly announced about  
10 its own test method?  
11 A. Sure.  
12 No test can precisely duplicate  
13 conditions of actual human smoking, and  
14 within fairly wide limits no one method  
15 can be said to be either right or wrong.  
16 The commission considers it most  
17 important that the test results be based  
18 on a reasonable standardized method, and  
19 that they be capable of being presented to  
20 the public in a manner that is readily  
21 understandable.  
22 Q. So the FTC said right off the bat in that  
23 first sentence it would be not duplicating actual  
24 human smoking?  
25 A. That's right.

26 MR. BELASIC:  
27 Could we turn to page two, Your  
28 Honor?  
29 THE COURT:  
30 You may publish it.  
31 MR. BELASIC:  
32 And could you highlight the portions

20130

1 at the top, Bert?  
2 BY MR. BELASIC:  
3 Q. Once again, Dr. Townsend, could you read to  
4 the jury what the FTC says about its own test  
5 method?  
6 A. Sure.  
7 In determining the testing method,  
8 the commission has not attempted to gauge  
9 the test to the amount of smoke, or tar  
10 and nicotine, which the average smoker  
11 will draw from any particular cigarette.  
12 No two human smokers smoke in the

13 same way. No individual smoker always  
14 smokes in the same fashion. The speed at  
15 which one smokes varies both among  
16 smokers, and usually also varies with the  
17 same individual under different  
18 circumstances even within the same day.  
19 Some take long puffs, or draws; some take  
20 short puffs.

21 That variation affects the tar and  
22 nicotine quantity in the smoke generated.

23 Q. Dr. Townsend, if the FTC test method cannot  
24 predict what a person would actually take in, then  
25 what is its purpose?

26 A. Its purpose clearly is to give consumers  
27 information that allows them to make choices in the  
28 marketplace.

29 So that even though this is a standardized  
30 test that doesn't predict what that particular  
31 smoker will get at any particular point in time, a  
32 consumer can make a choice in the marketplace

20131

1 whether they want to buy a higher tar cigarette or a  
2 lower tar cigarette or an ultralow tar cigarette.

3 MR. BELASIC:

4 We can put that down, Bert. Thank  
5 you.

6 BY MR. BELASIC:

7 Q. Now, earlier you said that you were invited  
8 by the National Cancer Institute to serve as an  
9 expert on a committee that was reviewing the FTC  
10 method?

11 A. That's right.

12 Q. And did you also as part of that, as part of  
13 that work on a National Cancer Institute committee,  
14 did you review the criticisms of the method?

15 A. Yes.

16 Q. Now, does the FTC method accomplish the  
17 purpose that you just stated?

18 A. It clearly accomplishes the purpose of  
19 providing relative information for the consumers,  
20 certainly.

21 Q. Now, did you make a presentation as part of  
22 that National Cancer Institute conference that you  
23 were invited to?

24 A. Yes.

25 Q. And was the conference itself published?

26 A. Yes, it was, in an NCI monograph.

27 Q. What was the subject matter of your  
28 presentation?

29 A. The subject matter was cigarette design and  
30 how to reduce tar and nicotine yields and in fact  
31 how general reduction in particular has reduced tar  
32 and nicotine yields over the years in a major way.

20132

1 Q. Now, you are aware, of course, that the FTC  
2 method has been really greatly criticized by a lot  
3 of people, aren't you?

4 A. Yes, I am aware of that.

5 Q. Well, as a cigarette designer, does the FTC  
6 test method have any use to you?

7 A. Well, it does, certainly. Because in most  
8 cigarette design projects, we have targets of tar,  
9 tar targets, and so having a standardized method is

10 essential for that.  
11 Also it gives us guidance. It's essentially  
12 a scale or a benchmark, if you will, that allows --  
13 that allows us to reduce tar and nicotine yields and  
14 have some kind of relative measure that shows  
15 progress.  
16 Q. Were the criticisms that were discussed at  
17 the National Cancer Institute conference, were those  
18 also included in the publication?  
19 A. Yes.  
20 Q. So it was widely known what criticisms there  
21 were of the FTC method?  
22 A. That's right.  
23 Q. And the FTC was aware of that?  
24 A. Of course.  
25 Q. Did the FTC change its method after this '94  
26 conference?  
27 A. No. The FTC method has not been changed.  
28 Q. Now, there has been some brief testimony in  
29 this case about the term elasticity in cigarettes.  
30 Is that a term that you and your other cigarette  
31 designers at R. J. Reynolds use?  
32 A. Elasticity is not a term that we use at R. J.

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1 Reynolds.  
2 Q. In the 25 years that you have been there,  
3 have you seen any Reynolds documents that used the  
4 term elasticity with respect to cigarette design?  
5 MR. BENCOMO:  
6 Your Honor, may we approach, please?  
7 THE COURT:  
8 You may approach.  
9 MR. BENCOMO:  
10 Thank you.  
11 (At sidebar:)  
12 MR. BENCOMO:  
13 Your Honor, my objection is that  
14 Mr. Belasic once again misstates earlier  
15 testimony.  
16 My question was very simple. The  
17 word was not elasticity. I used the term  
18 price elasticity, and that's the  
19 difference.  
20 And that's why this witness is now  
21 saying, No, I have never seen that term.  
22 That term is consistent with  
23 economics, consistent with the testimony  
24 of prior witnesses, but not the word  
25 elasticity alone.  
26 MR. BELASIC:  
27 Your Honor, I wasn't referring to  
28 anything that Mr. Bencomo said. There has  
29 been testimony in this case about  
30 elasticity from Drs. Farone and  
31 Henningfield with respect to the FTC test  
32 method.

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1 MR. BENCOMO:  
2 Then he needs to clarify that.  
3 THE COURT:  
4 Let me check your question.  
5 (In open court:)  
6 THE COURT:

The objection is overruled. Answer the question, if you are able to.

The question is: In the 25 years that you have been there, have you seen any Reynolds documents that used the term elasticity with respect to cigarette design?

A. The answer is no, I have not seen such documents that use that term elasticity.

Q. Have you ever heard the claim in using the term elasticity that relates -- that relates to the claim that somehow cigarette companies try to cheat the FTC smoking machine?

A. I have heard that argument.

Q. What's your understanding of that argument?

A. Well, my understanding is that the argument -- the argument is that through cigarette design, you can develop a cigarette that will cheat the machine, that will cheat the FTC test method, which means that it may measure low on the machine and yet deliver much higher tar yields than you would expect based on this relative ranking and essentially cheat the machine that way.

Q. Now, do those claims make sense to you as a cigarette designer?

A. No, they don't, not in what I have seen in

product development at R. J. Reynolds.

Q. As someone who has worked in cigarette design for 25 years and is current executive vice president of R. J. Reynolds R&D department, would you tell the jury whether R. J. Reynolds has ever designed a cigarette to be elastic or to cheat the machine?

A. We have not designed our cigarettes to cheat the FTC method.

Q. Now, are you saying that a person could not smoke a cigarette in a way that they would get higher amounts than the FTC's machine?

A. No, I am not saying that at all.

And I think in the last several questions you have asked me, I think it's clear that people smoke in different ways, and they may certainly smoke -- from one person to the next, they smoke differently. They may take different puff volumes, they may puff more often, they may puff less often, they may smoke more cigarettes and another person may smoke less.

Or even within the same subject, one person in the morning will certainly smoke a cigarette differently than they smoke a cigarette in the afternoon.

So people smoke cigarettes in all different,  
in all different manners.

Q. Now, could a person smoke a low tar cigarette and get more than the FTC test method, the smoking machine, measures?

A. Of course.

Q. Could they smoke a high tar cigarette and get more than the FTC machine measures?

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A. Of course.

Q. Could a smoker smoke a cigarette that's made by any manufacturer anywhere in the world and still

4 get more than the tar and nicotine that would be  
5 measured by the FTC smoking machine?  
6 A. Yes.  
7 Q. Could they also get less than the smoking  
8 machine?  
9 A. Yes.  
10 Q. It depends on how they smoked?  
11 A. It depends entirely on how they smoke.  
12 Q. Now, does that mean that all cigarettes have  
13 some degree of elasticity?  
14 A. Well, again, that's not a term I use. What I  
15 think the situation is is that with all cigarettes,  
16 there is extreme variability, and the variability  
17 depends on how people smoke.  
18 Q. Now, is it practically possible to make a  
19 cigarette that wouldn't have that kind of  
20 variability depending on how the person chose to  
21 smoke?  
22 A. You mean a cigarette that cannot be  
23 compensated?  
24 Q. Sure.  
25 A. Actually that's an area that we have done  
26 some research on at Reynolds. We have looked at  
27 several different approaches to try to make a  
28 cigarette that cannot be compensated, where you  
29 cannot change the volume of the puffs and get  
30 different amounts of tar and nicotine.  
31 Those experiments that we have conducted at  
32 Reynolds have been unsuccessful so far.

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1 Q. Now, based on what you told us, your  
2 experience as a cigarette designer and your  
3 experience on the government committee on the  
4 Federal Trade Commission's test method, is it a fair  
5 criticism of the FTC method to say that it doesn't  
6 measure actual human smoking?  
7 A. I don't think that's a fair criticism at all,  
8 because that method was never intended to estimate  
9 what any individual gets. The FTC made that clear  
10 in 1967.  
11 Q. Well, since smokers or at least some smokers  
12 can get more tar and nicotine than the FTC test  
13 method measures, does that mean that that big  
14 reduction in tar and nicotine that you showed us  
15 yesterday was an illusion?  
16 A. No, not at all.  
17 And in fact, if you look at the whole issue  
18 of compensation, it's very clear that compensation  
19 can and does occur. But that compensation from the  
20 data that's available in the scientific literature  
21 is not complete.  
22 On the average, compensation may occur to the  
23 level of approximately maybe 50 percent based on the  
24 scientific information that's available. That means  
25 that smokers who smoke lower tar cigarettes on the  
26 average still get less.  
27 Can any individual get much more? Of  
28 course. Can any individual get less? Sure. But on  
29 the average, smokers of low-tar and ultralow-tar  
30 cigarettes get less.  
31 Q. Now, the conference that you attended or were  
32 invited to attend by the National Cancer Institute,

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1 that was 1994; correct?  
2 A. That's right.  
3 Q. Have there been -- has the criticism of the  
4 FTC test method continued in the nine years since  
5 1994?  
6 A. Yes, it has.  
7 Q. Have there been any additional suggestions  
8 about changing the FTC test method since 1994?  
9 A. There has been lots of discussion, but I  
10 don't think there has been any official  
11 recommendations to change that method that I'm aware  
12 of.  
13 Q. Did the FTC take any steps to field  
14 suggestions on how to change its method?  
15 A. They did. They asked for comments on changes  
16 to the test method?  
17 Q. And when you say asked for comments, what  
18 does that mean?  
19 A. It means that the federal agency like the  
20 Federal Trade Commission will publish in the Federal  
21 Register a request for comments on a particular  
22 issue, and any one company, scientist, anyone that  
23 can respond or wants to respond can do so.  
24 Q. So R. J. Reynolds and other tobacco companies  
25 could give their comments and their suggestions on  
26 how to change it if they wanted to?  
27 A. That's right.  
28 Q. And Dr. Henningfield or Dr. Farone or any of  
29 the other plaintiffs' experts could also give their  
30 suggestions; correct?  
31 A. That's correct.  
32 Q. And you are aware that some of the

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1 plaintiffs' experts in fact gave suggestions on how  
2 to change the method, haven't they?  
3 A. I'm aware of that, yes.  
4 Q. Well, what has the FTC done now in the six  
5 years since they asked for comments? Have they  
6 changed their method?  
7 A. No, they haven't.  
8 Q. So Reynolds is still required today to use  
9 that FTC test method?  
10 A. Yes, it is a requirement that we publish tar  
11 and nicotine and carbon monoxide yield data in all  
12 advertising, and we must provide that data for all  
13 of our cigarette brands to the Federal Trade  
14 Commission.  
15 Q. If Reynolds or any other tobacco company  
16 wanted to put different tar and nicotine ratings in  
17 its advertisements that were different than the FTC  
18 test method, could they?  
19 A. No, I don't think so at all.  
20 Q. Could they put lower numbers in than the FTC  
21 test method results?  
22 A. No. We are required to the use FTC test  
23 method data.  
24 Q. What if they wanted to put in higher numbers,  
25 could they put in higher numbers than the FTC test  
26 method results show?  
27 A. No. We must report the FTC data, not lower,  
28 not higher.  
29 Q. If the FTC changes its test method, will  
30 Reynolds comply with those changes?

31 A. Of course. If the FTC decides to change that  
32 method, we will comply and report data using

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1 whatever new method the FTC comes up with.

2 Q. Dr. Townsend, you have reviewed some of the  
3 testimony by Dr. Farone in this case?

4 A. Some of it.

5 Q. And some of the testimony by  
6 Dr. Henningfield?

7 A. Yes, some.

8 Q. And are you aware that when they were  
9 discussing the FTC test method in particular,  
10 Dr. Henningfield talked about overwrap?

11 A. Yes.

12 Q. Can you tell the jury what overwrap is in a  
13 cigarette?

14 A. Overwrap is that small portion of tipping  
15 which is usually cork-colored that surrounds the  
16 filter, it's that small portion of tipping that  
17 overlaps onto the tobacco rod and holds the tobacco  
18 rod and filter together.

19 It usually extends over the tobacco rod or  
20 the cigarette paper three to five millimeters  
21 approximately.

22 Q. Now, is the overwrap length different in a  
23 full flavor high tar cigarette versus a light low  
24 tar cigarette?

25 A. No.

26 Q. Why not?

27 A. Well, because its function is to hold the  
28 filter and the tobacco rod together. Three to five  
29 millimeters will do that. There is no reason to  
30 change the length of that overwrap.

31 Q. So the overwrap doesn't have anything to do  
32 with the tar and nicotine yield of a cigarette?

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1 A. No. The overwrap is what it is.

2 Now, the FTC test method prescribes and very  
3 clearly prescribes that you smoke the cigarette down  
4 to three millimeters in front of the tipping  
5 overwrap. So three millimeters in front of that  
6 overlap is where the smoking stops; okay?

7 Q. Is there tobacco under the overwrap or is it  
8 just empty space?

9 A. There is tobacco under the overwrap. Again,  
10 remember that the tipping overwrap overlaps onto the  
11 tobacco rod, so there is tobacco under there.

12 Q. Do smokers typically smoke the tobacco that  
13 is under the overwrap?

14 A. No, smokers don't typically smoke the tobacco  
15 under the overwrap.

16 If they do, it tastes very bad. If you smoke  
17 right up to the filter, it tastes extremely bad, and  
18 sometimes will flare, which means it will actually  
19 ignite into a flame.

20 Q. Dr. Townsend, based on your experience, has  
21 the overwrap that attaches the tobacco rod to the  
22 filter been used to somehow fool the FTC machine?

23 A. Absolutely not.

24 Q. Are you familiar with some of the things that  
25 Dr. Henningfield said about particle size?

26 A. I'm generally familiar of some of what he  
27 said.

28 Q. Is it true that R. J. Reynolds somehow  
29 controls the actual particle size of the particles  
30 that are in the smoke?

31 A. No, that's absolutely false. We do not  
32 control the particle size, nor do we have a way of  
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1 doing it even if we wanted to.

2 Cigarette smoke is what scientists call a  
3 condensation aerosol. You have a lot of vapor phase  
4 that condenses when it cools to form these little  
5 droplets that we have talked about yesterday.

6 It's a condensation aerosol. And a  
7 condensation aerosol typically forms particle sizes  
8 in a fairly narrow range, in the submicron range.  
9 And for cigarette smoke, it's around two-tenths of a  
10 micron on average, which is really very small. It's  
11 so small you can't see the particles directly.

12 So submicron comes from the condensation  
13 aerosol, and any changes to the cigarette will have  
14 negligible and really not meaningful changes to any  
15 measured particle size.

16 Q. There has been a suggestion in this case that  
17 filters or moisture content could somehow affect  
18 particle size. Does Reynolds use filters or somehow  
19 control moisture content to affect particle size?

20 A. We use filters, of course. We do control  
21 moisture content in the tobacco. But neither of  
22 those affect the particle size of the smoke that  
23 comes out of that cigarette.

24 Q. Just to be clear, does R. J. Reynolds do  
25 anything to its cigarette to affect the size of  
26 smoke particles?

27 A. No, we don't.

28 Q. You are aware that Dr. Farone and  
29 Dr. Henningfield also talked about ammonia and the  
30 pH of smoke?

31 A. Right.

32 Q. And are you prepared to discuss your personal  
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1 knowledge and your expert opinion on those issues?

2 A. Yes, I am.

3 Q. Let's talk about that, then. Is ammonia a  
4 natural, a naturally occurring constituent in  
5 tobacco?

6 A. Ammonia is a chemical compound that is  
7 present at very low levels in cigarette smoke.

8 Q. And has R. J. Reynolds ever used ammonia  
9 compounds in the manufacturing of its cigarettes?

10 A. You are talking about added ammonia  
11 compounds?

12 Q. Yes.

13 A. Yes.

14 Q. Can you tell the jury what you have done and  
15 why you have done it?

16 A. Sure.

17 Our first use of ammonia in commercial  
18 products was in 1974, and the reason we have done  
19 that is because ammonia can react with certain other  
20 compounds in tobacco and in smoke to form compounds  
21 that we call pyrazines and also some pyridines.

22 These pyrazines are very flavorful compound  
23 that give more of a chocolaty baked aroma, and  
24 really change the taste characteristics of the

25 cigarette.  
26 So ammonia has been added for that taste  
27 improvement and for changing the taste signature of  
28 certain cigarettes.  
29 Q. Have you ever used ammonia in a process  
30 called KDN?  
31 A. We did. That was a process that was invented  
32 quite some time ago because -- and I think it stands

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1 to reason that the nicotine content in tobacco can  
2 be extremely variable depending on the weather.  
3 And we found that Burley in particular is  
4 very sensitive to weather conditions and curing  
5 conditions, and we had a number of years where there  
6 was very high nicotine levels in particularly  
7 Burley.  
8 And so we developed a process called KDN,  
9 which stands for Burley denicotinization, which used  
10 ammonia and steam where we could take the Burley  
11 tobacco, hit it with steam and a small amount of  
12 ammonia, and that would release nicotine which then  
13 could be removed by the steam from the tobacco trap,  
14 and we would be able to reduce the nicotine load.  
15 Q. To be clear, did the KDN process only  
16 decrease nicotine?  
17 A. Yes.  
18 Q. Was it ever used to increase nicotine?  
19 A. No.  
20 Q. Now, you talked about using some ammonia  
21 compounds into reconstituted tobacco of certain  
22 cigarettes?  
23 A. We have used ammonia compounds in  
24 reconstituted tobacco.  
25 Q. When was the first time that R. J. Reynolds  
26 did that?  
27 A. The first time commercially was 1974.  
28 Q. And what brand was it used in?  
29 A. Camel.  
30 Q. Now, was there anything going on in the  
31 marketplace that caused Reynolds to consider using  
32 this ammonia compound in making Camels?

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1 A. Actually there were -- yes. In addition to  
2 the research going on looking at ammonia compounds  
3 and its effect on taste, there were a number of  
4 hypotheses or theories going around.  
5 Because what we were seeing at Reynolds was  
6 we were seeing Marlboro starting to show some real  
7 strength in the market. It was growing very fast,  
8 and we believed that they used ammonia in their  
9 processing of reconstituted sheet, reconstituted  
10 tobacco.  
11 So one of the hypotheses or theories that was  
12 developed by our scientists as well as some  
13 scientists outside of Reynolds was that adding this  
14 ammonia would increase the pH and change the  
15 nicotine availability or yield or bioavailability --  
16 there were a number of theories -- and that that  
17 would affect consumer acceptance.  
18 We evaluated that particular theory in-house  
19 as well.  
20 Q. When you talk about this ammonia compound,  
21 how much is being used in the manufacture of

22 cigarettes?  
23 A. Well, it's a very low level of ammonia that's  
24 used in our commercial products.  
25 Q. You said it could affect the taste. How  
26 would that happen?  
27 A. Well, because taste can be very sensitive.  
28 Taste and aroma is very sensitive, and formation of  
29 even low levels of these pyrazines which are  
30 extremely flavorful and extremely aromatic, these  
31 pyrazines can make a difference even at low levels  
32 of added ammonia.

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1 MR. BELASIC:  
2 Your Honor, I would like to call up  
3 Exhibit AT-700.  
4 And Your Honor, could I give  
5 Dr. Townsend a hard copy?  
6 THE COURT:  
7 Yes.  
8 BY MR. BELASIC:  
9 Q. Dr. Townsend, do you see that this document  
10 says Quarterly Report, July-September '82, from C.  
11 R. Green?  
12 A. Yes.  
13 Q. Do you know who C. R. Green was?  
14 A. That's Dr. Charlie Green, a scientist at  
15 R. J. Reynolds.  
16 Q. And are you familiar with this report?  
17 A. Yes, I have seen this before.  
18 Q. Something that was written by Charlie Green  
19 in the ordinary course of his work at R. J. Reynolds?  
20 A. Yes. This was a quarterly report from  
21 Charlie Green.  
22 Q. And it's been kept by the company in the  
23 ordinary course of their business?  
24 A. Yes.

25 MR. BELASIC:  
26 Your Honor, I move to admit AT-700 as  
27 a business record.  
28 MR. BENCOMO:  
29 No objection.  
30 THE COURT:  
31 With no objection, it will be  
32 received in evidence.

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1 MR. BELASIC:  
2 Your Honor, move to publish page two  
3 of this document.  
4 THE COURT:  
5 You may publish.  
6 MR. BELASIC:  
7 And Bert, could you highlight the  
8 portion in the middle of the document?  
9 Could you blow it up? It's a bit hard to  
10 read.  
11 BY MR. BELASIC:  
12 Q. Could you read for the jury, Dr. Townsend,  
13 what Dr. Green wrote about Reynolds' use of ammonia  
14 in manufacturing tobacco?  
15 A. In this paragraph?  
16 Q. Yes.  
17 A. There is general agreement that  
18 ammoniation of tobacco has two general

19 effects on its smoking properties.  
20 Compared to an untreated control, the  
21 smoke of an ammoniated product is milder  
22 and less irritating.  
23 A key step to observation of less  
24 irritation from ammoniated products is the  
25 removal of excess unreacted ammonia from  
26 the treated tobaccos.  
27 This has been accomplished by either  
28 a waiting period between ammoniation and  
29 use, or by steaming the ammoniated  
30 tobaccos.  
31 Concurrent with the reduction in  
32 irritation, ammoniated tobaccos produce a

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1 smoke with altered flavor and aroma  
2 properties. The flavor becomes more  
3 chocolate-like, and this is associated  
4 with the presence of higher levels of  
5 smoke pyrazines.  
6 Because of these flavor changes,  
7 ammoniated tobaccos are generally regarded  
8 as being more Burley-like. This factor  
9 must be considered in the use of treated  
10 tobaccos as part of the cigarette blends.  
11 The attributes of ammoniated tobacco,  
12 less irritation and more chocolate flavor,  
13 have also been used to describe major  
14 product differences between our products  
15 and those of our major competitor.  
16 We do not know if this gives them a  
17 competitive advantage in the marketplace.

18 Q. Now, Dr. Townsend, do you agree with what  
19 Dr. Green said about using ammoniation to improve  
20 the flavor of tobacco?

21 A. Yes, I do, certainly.

22 MR. BELASIC:

23 You can put that down, thank you.

24 BY MR. BELASIC:

25 Q. Now, besides increasing flavor, does  
26 ammoniation have any other effect over reconstituted  
27 sheet tobacco or tobacco sheet?

28 A. It does have a physical effect, because the  
29 use of low levels of ammonia can release some  
30 compounds called pectins from the tobacco which then  
31 help form a stronger sheet.

32 So it will improve sheet strength. The

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1 finished reconstituted tobacco paper sheet will be  
2 stronger.

3 Q. Now, does Reynolds use ammonia compounds in  
4 all its tobaccos or just the reconstituted tobacco  
5 sheet?

6 A. We add ammonia compounds to some of our  
7 reconstituted sheet formulations.

8 Q. Are there Reynolds brands that don't have any  
9 ammoniated reconstituted tobacco sheet?

10 A. Yes. Most Reynolds brands do not have  
11 ammoniation or do not have added ammonia.

12 Q. Could you tell us some of the brands that  
13 don't have any of this ammonia used in the  
14 manufacturing process?

15 A. Certainly all of the Winston style cigarettes

16 do not have any added ammonia. In fact, they don't  
17 have any additives on the tobacco.

18 And then there are a number of Vantage, More,  
19 Now. Some of the Camel styles do not, some of  
20 the -- the Salem, the entire Salem family does not  
21 have added ammonia.

22 Q. No Salem cigarette has added ammonia?

23 A. No.

24 Q. So if one of the class representatives smoked  
25 Salem cigarettes, ammonia wouldn't have anything to  
26 do with her smoking?

27 A. That's correct.

28 Q. Well, if ammonia improves flavor, why don't  
29 you just use it in all the tobaccos in all the  
30 cigarettes you make?

31 A. Well, I think the simple reason is because  
32 people have different expectations from different

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1 cigarettes. People like different types of tastes.

2 Some people like the taste characteristics  
3 that come from highly chocolate-type blend where we  
4 have added ammonia. Some people prefer a more  
5 simple taste characteristic like a Winston.

6 So people just have different preferences,  
7 and we provide products in the marketplace that have  
8 a range of different tastes signatures.

9 Q. Now, let's talk about pH. And you have seen  
10 claims that ammonia could increase the pH of  
11 cigarette smoke, haven't you?

12 A. Yes.

13 Q. And have you ever seen any memos written by  
14 someone at R. J. Reynolds that it could have that  
15 effect?

16 A. Sure.

17 Q. Can you tell us just briefly what pH is?

18 A. Sure. pH is a measure of acidity or  
19 basicity. It's a scale that goes from 0 to 14.

20 Neutral, which would be neither acid nor  
21 base, is right in the middle at seven. Anything  
22 that's less than seven is acidic, anything that is  
23 higher than a pH of 7 is basic.

24 Q. Are you familiar with claims that pH could  
25 affect the amount of free nicotine in smoke?

26 A. Sure.

27 Q. Could you tell us what free nicotine is?

28 A. I would be happy to.

29 First of all, nicotine has a couple -- two  
30 nitrogens on it and is considered to be a basic  
31 compound. That basic compound can react with an  
32 acid, pick up a hydrogen ion, and become a salt.

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1 Now, the salt is really not volatile. The  
2 free nicotine, the one without the hydrogen picked  
3 up, is actually a semi-volatile, so it can distill,  
4 it can evaporate.

5 So free nicotine is volatile. The bound or  
6 salt version is not volatile.

7 Q. Now, is this free nicotine theory a secret?

8 A. No, of course not. I think it's certainly  
9 been discussed in many areas out in the open  
10 literature. I think it's what any chemist would  
11 expect of acid-based reactions.

12 Q. And have scientists at Reynolds discussed the

13 possible relationship of pH and free nicotine?

14 A. Yes.

15 Q. Have you gone back and personally looked at  
16 the pH levels of some of the brands of cigarettes  
17 that Reynolds sells?

18 A. I have. I have looked at extensive databases  
19 of essentially all of the pH data that we have, and  
20 frankly we don't measure pH on a routine basis for  
21 our commercial products. We just don't do it.

22 But there is quite a lot of data that we have  
23 measured over many years, and what I found was that  
24 with ammoniation, at the levels of ammonia we add to  
25 cigarettes, pH doesn't change.

26 And an example of that is when we first  
27 ammoniated Camel in 1974, the pH before we added  
28 ammonia was about six, the pH after we added ammonia  
29 was also six.

30 Winston is another example. We first  
31 ammoniated Winston in 1979. The pH before we  
32 ammoniated was the same as the pH after we

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1 ammoniated.

2 Then in 1997, we took ammonia out of Winston,  
3 so we did the reverse. In fact, we took all  
4 additives out of Winston. And before 1997, Winston  
5 had a pH, smoke pH of six. When we took all of the  
6 additives including ammonia out, the smoke pH was  
7 six.

8 Q. You talk about Winston and Camel. On average  
9 what is the pH of the cigarettes that Reynolds  
10 sells?

11 A. About six.

12 Q. Now, out of a pH of six, how much free  
13 nicotine is there, if any, in the cigarettes that  
14 Reynolds sells or in the smoke from the cigarettes  
15 that Reynolds sells?

16 A. Well, I think using a calculation from an  
17 equation called the Henderson-Hasselbach equation,  
18 one can actually estimate how much free nicotine  
19 there should be. This estimates it from the acid-  
20 base equilibrium.

21 And the answer is extremely trace amounts,  
22 very low amounts of free nicotine would be expected  
23 at a pH of six using that calculation.

24 Q. Based on your review of the Surgeon General's  
25 reports, do you know if the Surgeon General has  
26 reached a similar conclusion?

27 A. Yes, he has, and in fact he even refers to  
28 the Henderson-Hasselbach equation.

29 Q. So has the Surgeon General concluded that at  
30 a pH of around six, where Reynolds' cigarettes are,  
31 that there is virtually no free nicotine?

32 A. That's his conclusion.

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1 Q. You just mentioned additives and you said,  
2 for example, in the Winston cigarette you took all  
3 the additives out.

4 Can you tell us why Reynolds would use any  
5 additives in any of the cigarettes it would sell?

6 A. Certain additives and ingredients that we use  
7 in fact do change the taste characteristics of the  
8 cigarette. And again, as I said just a minute ago,  
9 people have different preferences for the different



10 tastes in their cigarettes.  
11 And so we use additives to try to generate  
12 different taste signatures. So that, for example,  
13 Doral will taste different than Camel because people  
14 like those differences.  
15 Q. And does Reynolds test the additives, the  
16 flavorants that it uses in its cigarettes?  
17 A. Yes, we do test all additives that we use in  
18 cigarettes.  
19 Q. In-house?  
20 A. In-house. We contract some work out-house,  
21 outside of Reynolds, yes.  
22 Q. Have the additives that Reynolds used ever  
23 been evaluated by independent outside scientists?  
24 A. Yes, they have.  
25 MR. BELASIC:  
26 Your Honor, if we could put up  
27 Exhibit AS-546?  
28 BY MR. BELASIC:  
29 Q. Dr. Townsend, could you identify this  
30 document for the jury?  
31 A. This is a list of all ingredients used by the  
32 major cigarette companies in the tobacco industry.

20154

1 Q. And its title then is Cigarette Ingredients:  
2 A Complete List and Background?  
3 A. Yes.  
4 Q. Do you see at the bottom it says R. J.  
5 Reynolds Tobacco Company?  
6 A. Yes, I do.  
7 Q. Was this a public announcement made by R. J.  
8 Reynolds along with other tobacco companies in 1994?  
9 A. It was. In 1994 R. J. Reynolds and our major  
10 competitors released to the public a full list of  
11 all additives and ingredients that we use.  
12 Q. And was it prepared and retained in the  
13 ordinary course of R. J. Reynolds' business?  
14 A. Yes.  
15 MR. BELASIC:  
16 Your Honor, I move to admit as a  
17 business record.  
18 MR. BENCOMO:  
19 No objection, Your Honor.  
20 THE COURT:  
21 With no objection, it will be  
22 received.  
23 MR. BELASIC:  
24 May we publish the first page, Your  
25 Honor?  
26 THE COURT:  
27 You may publish.  
28 BY MR. BELASIC:  
29 Q. Doctor, can you tell the jury, what does it  
30 mean when it says complete list? What is that?  
31 A. It's a combined list from all the tobacco  
32 companies.

20155

1 Q. Does it really list all the ingredients that  
2 you use in your cigarettes at R. J. Reynolds?  
3 A. It lists all of the additives and ingredients  
4 that R. J. Reynolds uses.  
5 Q. Does it include all the ingredients that are  
6 used in the other companies?

7 A. Yes.  
8 Q. Now, who were the authors of this paper?  
9 A. Well, certainly the information came from  
10 American Tobacco, Brown & Williamson, Liggett,  
11 Lorillard, Philip Morris and Reynolds.  
12 Q. And were there outside toxicologists that you  
13 talked about who reviewed these ingredients?  
14 A. In 1994 we actually had a review panel that,  
15 with the disclosure of this to the public, came back  
16 and looked at these ingredients and tried to  
17 determine the risks of these additives.  
18 So it's a group of prominent toxicologists  
19 that came together to evaluate these.  
20 Q. When you say a group of prominent  
21 toxicologists reviewed these ingredients, were those  
22 people who were on the payroll of R. J. Reynolds or  
23 some of the other tobacco companies?  
24 A. No, they were not tobacco company employees.  
25 They were well known toxicologists. They were paid  
26 for their time to evaluate these, of course.  
27 But as rigorous scientists, they evaluated  
28 these in an objective way.  
29 Q. What was the conclusion of these outside  
30 scientists as to the health hazard, if any, of these  
31 cigarette ingredients?  
32 A. The conclusions from this toxicology panel

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1 was that these additives and ingredients are not  
2 hazardous under the conditions of use in those  
3 cigarettes.

4 MR. BELASIC:

5 We can put that down, thank you,

6 Bert.

7 BY MR. BELASIC:

8 Q. Now, before this was publicly disclosed and  
9 continuing thereafter, is Reynolds required to  
10 disclose ingredients to the U.S. government?  
11 A. Yes. In the mid 1980s, the U.S. Government  
12 Department of Health and Human Services required  
13 tobacco companies to report to them lists of  
14 ingredients, and that was a mandate from Congress.  
15 Q. And that requirement applies not just to  
16 Reynolds, but to Philip Morris and B&W and Lorillard  
17 as well?  
18 A. That's right, that's correct.  
19 Q. And what is the Department of Health and  
20 Human Services supposed to do with the ingredients  
21 list that you provide the government?  
22 A. Under the law, HHS, Health and Human  
23 Services, is supposed to review this list, and if  
24 they see anything on there that causes them concern,  
25 they are supposed to notify Congress.  
26 Q. Now, you said Reynolds has done some in-house  
27 testing --  
28 A. Yes, quite a lot.  
29 Q. -- of its ingredients?  
30 A. Quite a lot.  
31 Q. Biological testing?  
32 A. Biological testing, absolutely.

20157

1 Q. Now, you have described at various times  
2 different in-house biological tests that have been  
3 done on different cigarettes. Let me ask you, have

4 you ever heard of something called the gentlemen's  
5 agreement?  
6 A. I have heard of it in the course of  
7 litigation.  
8 Q. Have you ever seen a document that referred  
9 to the so-called gentlemen's agreement?  
10 A. Yes, again, in the course of litigation.  
11 Q. Have you ever heard the claim that because of  
12 some so-called gentlemen's agreement, the companies  
13 aren't supposed to do biological testing in-house?  
14 A. I have heard that claim.  
15 Q. But Reynolds does biological testing  
16 in-house, don't they?  
17 A. Yes, and we have for a long time.  
18 Q. Has anyone at R. J. Reynolds ever told you  
19 that you can't do something because of some  
20 so-called gentlemen's agreement?  
21 A. No, nobody has ever told me that.  
22 Q. Has any cigarette design at R. J. Reynolds  
23 ever been affected by some so-called gentlemen's  
24 agreement?  
25 A. No.  
26 Q. Can you tell the jury, just briefly, some of  
27 the biological testing that Reynolds does?  
28 A. On additives or in general?  
29 Q. Just in general.  
30 A. In general? We have extensive biological  
31 testing capabilities and capacities.  
32 We have -- we do laboratory tests, some of

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1 which we have already talked about, genotoxicity  
2 tests, cytotoxicity tests, which includes Ames test,  
3 Neutral Red, sister chromatid exchange, a variety of  
4 others.

5 There is animal tests that we conduct  
6 in-house, skin painting, inhalation, Alery  
7 irritation studies with animals. Just a whole host  
8 of biological assays.

9 Q. Now, can you tell us what the Product  
10 Stewardship Program is that you have referred to?

11 A. The Product Stewardship, yes. We have a very  
12 specific product stewardship philosophy at Reynolds,  
13 and it is that in the course of our work, any  
14 changes we make to cigarettes, we will ensure that  
15 nothing we do to those cigarettes will increase the  
16 risk.

17 Because cigarette smoking is such a strong  
18 risk, our job is to reduce risks and to do  
19 everything we can to make sure we are not going to  
20 increase risks.

21 Q. And is the four-step program related to this?

22 A. It's related to it, yes.

23 Q. How?

24 A. The four-step program is a tiered testing  
25 program, and so we evaluate changes to our  
26 products.

27 Let's say as a cigarette designer I want to  
28 change this -- the particular blend in one  
29 cigarette. We will use that tiered testing approach  
30 to decide whether there is any reason to believe we  
31 have increased risk or not.

32 So we will start out with some chemistry

20159

1 tests, certain chemistry tests. Based on the  
2 results of those, we will do some biology. Based on  
3 the results of those, we may do more biology. And  
4 based on the results of those, we may even do animal  
5 testing.

6 So it's a tiered testing plan that is  
7 actually quite similar to the four-step process.

8 Q. Now, based on your 25 years of training and  
9 experience, is there a scientific consensus on what  
10 test you could do to determine if a new cigarette  
11 design decreases health risks?

12 A. No, there is not a consensus at all to focus  
13 us down to one or two or even a handful of tests  
14 that are important.

15 However, in our research, we have come to a  
16 number of tests that we believe, taken together,  
17 provides the weight of the evidence that can lead to  
18 the suggestion that it may reduce risk.

19 Q. Now, have Reynolds scientists been involved  
20 in working toward trying to develop some sort of  
21 consensus on this issue?

22 A. Absolutely. We have worked very hard for the  
23 last quite a few years trying to develop consensus.

24 We talked with scientists in the government,  
25 scientists in the public health agencies, scientists  
26 at universities, trying to push for a consensus in  
27 what tests, what changes constitute reduced risk.

28 Q. Now, Doctor, based on your training and  
29 education, from the latter quarter century of work  
30 that you put in on cigarette design, has Reynolds  
31 responded to the public health community and their  
32 criticisms of the smoking and health risks for the

20160

1 last 50 years?

2 A. Yes, we have responded to the criticisms  
3 related to smoking and health, and we have done that  
4 through cigarette design, through changing the  
5 cigarette, reducing tar and nicotine yields in  
6 general reduction, through trying to develop  
7 alternative cigarettes that are probably safer,  
8 through evaluating additives and ingredients. We  
9 have responded directly to the allegations.

10 Q. Based again on your training and your  
11 experience, 25 years of work on cigarette design, do  
12 you have an opinion as to whether the cigarettes  
13 that Reynolds has made over the last 50 years have  
14 complied with the state of the art in cigarette  
15 design?

16 A. Yes, it's my opinion that at any point in  
17 time, R. J. Reynolds' products represent state of the  
18 art.

19 Q. And again, based on your 25 years of  
20 experience and your training and education, do you  
21 have an opinion as to whether anyone anywhere else  
22 in the world has developed a feasible alternative  
23 cigarette design that is superior to what Reynolds  
24 has developed?

25 A. Well, it's clearly my opinion that there are  
26 no feasible alternative designs other than what  
27 Reynolds has developed, that no one in the world has  
28 developed a feasible alternative design.

29 Q. And do you have an opinion about the quality  
30 of Reynolds' research for the last 50 years?

31 A. I do.

32 Q. What's your opinion of the quality of  
20161

1 Reynolds' scientific research?

2 A. Well, the quality of research at Reynolds I  
3 think is first class. We have top scientists, we  
4 have excellent facilities, we have the support from  
5 the company.

6 It is a first class research organization,  
7 and importantly we have made progress.

8 Q. Now, you have got a Ph.D. in chemistry, and I  
9 suppose you could work at any number of other  
10 companies.

11 Given all of the criticism of tobacco  
12 companies and smoking, why do you continue to work  
13 at R. J. Reynolds?

14 A. Well, I think there are several reasons I  
15 work at R. J. Reynolds.

16 First is because all -- as I have already  
17 said, the scientists at Reynolds are first class.  
18 The people who I work with are scientific experts  
19 and they care about what they are doing.

20 I work at Reynolds because there is a  
21 scientific challenge in the work. This is very  
22 complicated stuff, and trying to reduce the risks of  
23 smoking through cigarette design is very complex and  
24 it takes a lot of skilled, skilled scientists to do  
25 that very challenging work.

26 And the third reason is because in the course  
27 of doing all of this, if we are successful, then we  
28 make a difference.

29 Q. Well, do you really think that based on your  
30 efforts and the efforts of other scientists at  
31 Reynolds, that you have made a difference on  
32 reducing the risks of smoking and identifying what's  
20162

1 known about the risks of smoking?

2 A. I do believe that we have made a difference,  
3 and I believe that we will continue to make even  
4 more difference.

5 MR. BELASIC:

6 Your Honor, that's all the questions  
7 I have on direct.

8 THE COURT:

9 We will take our midmorning recess at  
10 this point until 11:00 by the wall clock,  
11 ladies and gentlemen.

12 (In open court without a jury  
13 present:)

14 THE COURT:

15 Let the record reflect that the jury  
16 has left the courtroom.

17 Anything for the record by plaintiffs  
18 counsel?

19 MR. RUSS HERMAN:

20 No, Your Honor.

21 THE COURT:

22 Defense counsel?

23 MR. LONG:

24 No, Your Honor.

25 THE COURT:

26 We will recess until 11:00 on the  
27 wall clock.

28 (A recess is taken at 10:45 a.m.)  
29 -- -- --  
30 (In open court with a jury present at  
31 11:05 a.m.:)  
32 THE COURT:

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1 Cross-examination, Mr. Bencomo?  
2 MR. BENCOMO:  
3 Yes, Your Honor.  
4 Thank you, Your Honor. Good morning,  
5 ladies and gentlemen of the jury.

6 -- -- --  
7 CROSS-EXAMINATION

8 BY MR. BENCOMO:

9 Q. Good morning, Dr. Townsend?

10 A. Good morning.

11 Q. Sir, I would like to begin by just following  
12 up on some of the answers that you gave to  
13 Mr. Belasic and then get into something else.

14 But you testified I believe the other day  
15 that you have now -- and these are my words -- you  
16 now hold the record of testifying more on behalf of  
17 tobacco companies in connection with the industry  
18 litigation; is that not correct?

19 A. I think that may be possible. I don't know  
20 for sure.

21 Q. And forgive me for saying this, but you know  
22 that we have had the benefit, then, of reviewing  
23 your testimony in previous trials. I'm sure you are  
24 aware that lawyers do that.

25 A. Of course.

26 Q. And you will have to also forgive me for the  
27 fact that your answers to Mr. Belasic's questions  
28 seemed scripted. They appear to me to be things  
29 that you have gone over with every single time, kind  
30 of like a little story line. Is that an unfair  
31 statement, sir?

32 A. That's essentially correct, there is a thread

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1 of the same stories, because the issues in  
2 litigation typically are scientifically based and  
3 the science is what it is.

4 What we have done at Reynolds to try to  
5 reduce risks of smoking are what it is. And so,  
6 yes, the story is similar in various courtrooms.

7 Q. The story doesn't change.

8 Well, let's talk about the Allgood case back  
9 in 1991. Do you remember giving a deposition in  
10 that case?

11 A. Vaguely. That was quite a while ago.

12 Q. I understand that, but you have been at it  
13 for quite a while, haven't you?

14 A. Since approximately that time, I would  
15 suppose.

16 Q. Now, you gave your resume' as you did in this  
17 case. You usually submit not only an expert report,  
18 but also a resume' or a curriculum vitae so that the  
19 lawyers and the jury get to know who you are. Is  
20 that a fair statement?

21 A. Yes, that's fair.

22 Q. Now, what I found interesting is that in your  
23 recent resume' that you gave, you listed, as you did  
24 back then, the you said 20 articles that you wrote,

25 and those haven't changed since 1991. You don't  
26 list any additional articles; is that correct?  
27 A. I don't recall exactly, but I would say it's  
28 approximately the same as it was back then.  
29 Q. And your expertise is really in the area --  
30 you are going to have to help me with this, if you  
31 can just kind of put it very briefly, very  
32 succinctly in laymen's terms -- really in the area

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1 of how the cigarette burns or something so that in  
2 case somebody falls asleep, the cigarette doesn't  
3 burn and the house catches on fire. Is that a fair  
4 statement? That's your real area of expertise?  
5 A. I'm not sure I completely understand your  
6 question.  
7 If you are talking about that one area of  
8 research that I have been involved in called  
9 cigarette fire safety, that was research that we  
10 conducted at Reynolds and I was involved in trying  
11 to see if there is ways to design cigarettes so that  
12 they are less likely to start a fire if a person  
13 accidentally drops it on upholstered furniture.  
14 Q. Now, what I didn't see in your resume' of  
15 1991 was your listing of having worked at Liggett &  
16 Myers, another tobacco company.

17 A. I don't recall that at all. In fact, I think  
18 my summer employment that one summer at Liggett &  
19 Myers, I think I have had it in my CV all along.

20 If I didn't at that point, that was probably  
21 a mistake.

22 Q. Well, I'm going to show you the resume' that  
23 is attached to the Allgood deposition.

24 MR. BENCOMO:

25 May I approach the witness, Your  
26 Honor?

27 BY MR. BENCOMO:

28 Q. And I ask you to please look through there  
29 and tell the jury whether or not the name Liggett &  
30 Myers appears in that resume'?

31 A. No, it doesn't. As I suggested, that was  
32 probably a mistake. I think subsequent CVs

20166

1 certainly have had that.

2 Q. Thank you.

3 Well, the reason why it didn't appear is  
4 because when you first started testifying, you  
5 didn't list it since Liggett & Myers, as you well  
6 know, is the first company to admit that nicotine is  
7 addictive. You are aware of that, are you not, sir?

8 A. You asked me two different questions, I  
9 think.

10 Q. Are you aware of the fact that Liggett &  
11 Myers was the first company to admit that nicotine  
12 is addictive and that they are the first to break  
13 ranks with the industry on that issue?

14 A. I'm aware of that.

15 Q. And so someone caught you on it, and that's  
16 why you started finally naming or putting on your  
17 resume' the name Liggett & Myers, because someone  
18 asked you at one time, Well, Dr. Townsend, isn't it  
19 a fact that you worked for Liggett & Myers at some  
20 point? And you had to admit that you had; correct?

21 A. I don't recall that at all. And I'm not

22 ashamed of the fact that I worked for Liggett &  
23 Myers that one summer when I was a student. I did  
24 some good research at Liggett & Myers, particularly  
25 in the area of cigarette paper and how to reduce  
26 carbon monoxide. It was a good piece of summer's  
27 work.

28 Q. You are also aware, are you not, sir, that  
29 Liggett & Myers -- and I will show the document  
30 later, but you are aware, are you not, that Liggett  
31 & Myers was never a signatory to the Frank Statement  
32 of 1954?

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1 A. I think that's probably correct, yes.

2 Q. But these four defendants, Reynolds, your  
3 company, Philip Morris, Lorillard, and Brown &  
4 Williamson were definitely signatories to the Frank  
5 Statement; correct?

6 A. As I recall, that's correct.

7 Q. Now, Mr. Belasic asked you a question, and I  
8 wrote down what he asked you. He said, I suppose  
9 you could work at a lot of other companies.

10 Do you remember that question?

11 A. Vaguely, yes.

12 Q. Yes, sir. Do you really believe that other  
13 companies not in this industry that makes bagfuls of  
14 money in profits would pay a chemist three hundred  
15 and eighty-two thousand dollars a year?

16 A. If they were head of research --

17 Q. Yes or no, sir, and then you can answer, you  
18 could explain?

19 MR. LONG:

20 Objection, argumentative.

21 THE COURT:

22 Overruled. Answer the question, if  
23 you are able to.

24 A. Yes, I believe another company outside of the  
25 tobacco industry would do that for the head of their  
26 research department.

27 Q. Sir, we will get into it at some length later  
28 on, but Mr. Belasic also asked you about the FTC  
29 machine. Do you remember all of those questions?

30 A. Yes.

31 Q. Well, I want to make sure that you and I  
32 understand each other.

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1 We are not here to criticize the government.  
2 Do we understand each other?

3 A. That's a broad question. I'm not sure what  
4 you mean.

5 Q. We don't criticize the Surgeon General, you  
6 understand that?

7 A. Again, I'm not understanding your question.

8 Q. Do you understand that the plaintiffs in this  
9 case are not criticizing the Surgeon General of the  
10 United States?

11 A. I don't know. I can't speak to that.

12 Q. Okay. Do you realize and understand that the  
13 plaintiffs in this case do not knock or criticize  
14 the National Cancer Institute?

15 A. Again, I don't know. I can't speak to that.

16 Q. Do you know or realize that we do not knock  
17 or criticize the Federal Trade Commission?

18 A. Again, I don't know.



19 Q. Well, do you know who it is that we  
20 criticize?  
21 A. Well, certainly you are criticizing the  
22 defendants in this case.  
23 Q. Thank you.  
24 Now, do you remember when Mr. Belasic asked  
25 you a series of questions yesterday about whether or  
26 not your salary or bonus would be affected by how  
27 you testify in this case? Do you remember that?  
28 A. I do remember that.  
29 Q. And you said -- what was your answer, if you  
30 could just refresh the jury's recollection?  
31 A. I don't remember exactly the words I said,  
32 but I can tell you the answer to that general

20169

1 question again.  
2 My salary, bonus, any compensation is not  
3 affected by my presence at trial, my willingness or  
4 unwillingness to testify at trial.  
5 Q. Now, do you have a contract with Reynolds?  
6 A. I do.  
7 Q. And how long does that contract run?  
8 A. I'm not sure what you mean, run.  
9 Q. Do you have a year left, two years, is it a  
10 lifetime sinecure?  
11 A. It's not a time contract in the way you are  
12 suggesting.  
13 Q. Well, then, tell the jury what type of  
14 contract you have.  
15 A. In general, it's a contract that essentially  
16 says that if for any reason my responsibilities are  
17 diminished within the company, then there is a  
18 certain period of time that I will be paid my  
19 current salary before termination.  
20 Q. So do you mean to tell me that if for  
21 whatever reason you got demoted, let's say your  
22 chemistry, your research wasn't good all of the  
23 sudden -- I'm not saying that it isn't -- that even  
24 though they were paying someone else in a similar  
25 position fifty thousand dollars a year to conduct  
26 that type of work, that even though you were demoted  
27 to that rank, you would still get three hundred and  
28 fifty thousand or three hundred and eighty-two  
29 thousand dollars a year? Is that what you are  
30 telling us?  
31 A. Not exactly. If I were demoted, for example,  
32 and they decided they wanted a new head of research

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1 and development, they would pay me a certain amount  
2 of money that's related to my salary over a period  
3 of time.  
4 Q. But what I don't understand is -- and I want  
5 to make sure that we all get this straight --  
6 tomorrow could the board of directors or the CEO --  
7 Andy you called him, what's his last name?  
8 A. Schindler.  
9 Q. Mr. Schindler. You call him Andy, don't you?  
10 A. I do.  
11 Q. Andy Schindler, for whatever reason, could he  
12 say, We don't want your services anymore, we are  
13 going in another direction?  
14 A. Yes, absolutely he could do that.  
15 Q. So you can't tell this jury that, Well, I

16 have a job no matter what happens? That really  
17 depends, and it's up to the chairman and the board  
18 of directors; is that not correct, sir?  
19 MR. GAY:  
20 Objection, mischaracterizes --  
21 THE COURT:  
22 Overruled. Answer the question, if  
23 you are able to.  
24 A. Certainly my job can be terminated. I could  
25 lose my job at any point.  
26 Q. And just to use unfortunately a recent  
27 example, you could lose your job as Coach Silas did  
28 because the owners don't like what you are doing for  
29 whatever reason. Is that fair?  
30 A. I think that's fair.  
31 Q. So you really are not privy to how the board,  
32 the board or Mr. Schindler were to react if you were

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1 to make admissions in this courtroom that go against  
2 the company's stated position on health and smoking;  
3 is that not correct, sir?

4 A. No, that's not correct. I think that's a  
5 completely misleading question.

6 MR. BENCOMO:

7 Your Honor, excuse me, may we  
8 approach, please?

9 MR. GAY:

10 Objection.

11 MR. BENCOMO:

12 That's why I want to approach.

13 MR. GAY:

14 You interrupted the witness.

15 THE COURT:

16 Had you finished your answer?

17 THE WITNESS:

18 No, Your Honor.

19 (At sidebar:)

20 THE COURT:

21 You interrupted his answer,

22 Mr. Bencomo, and that's not good form.

23 What have you got to say?

24 MR. BENCOMO:

25 What I have to say, Judge, is that  
26 he's done this 21 times, he talks about  
27 throughout all his testimony this judge  
28 overruled this, what you are saying is  
29 misleading.

30 I mean, he's not a judge to say what  
31 I have to do and all that. That's  
32 absolutely absurd.

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1 THE COURT:

2 He's on cross, he's a sophisticated  
3 witness and you are a sophisticated  
4 lawyer, wide open cross.

5 If that's an objection, it's  
6 overruled. But if his answer strays from  
7 the question asked, I'm going to stop him.

8 MR. BENCOMO:

9 Thank you very much.

10 (In open court:)

11 THE COURT:

12 The objection is overruled. Finish

13 your answer if you had not finished it,  
14 please.

15 THE WITNESS:

16 Thank you, Your Honor.

17 THE COURT:

18 But I will remind you to keep your  
19 answers relevant to the inquiries put to  
20 you.

21 THE WITNESS:

22 Yes, Your Honor.

23 A. Can you repeat the question, please?

24 Q. Yes, sir. You are not privy to how the board  
25 of directors would react if you were to make an  
26 admission in this courtroom that went against the  
27 company's stated position on health and smoking; is  
28 that correct?

29 A. No, that's not exactly correct. I think a  
30 number of the statements I make here -- in fact, my  
31 testimony is my opinion based on my experience,  
32 training, education and work over 25 years at

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1 Reynolds.

2 Nobody at the board of directors level,  
3 Mr. Schindler, do not expect me to say certain  
4 things. So I don't -- they are not expecting me to  
5 say certain things, so therefore any speculation of  
6 what they would do if I said something they didn't  
7 like in trial is only speculation, and I can't  
8 respond to that.

9 Q. Now, sir, the other day when I asked you some  
10 questions about individuals who had come with you, I  
11 asked you about one particular individual, and you  
12 indicated that he was not an attorney. Do you  
13 remember that?

14 A. Yes.

15 Q. Okay. Is it not a fact that that individual  
16 is a top scientist with R. J. Reynolds?

17 A. That is a fact.

18 Q. And he has now spent three days watching you  
19 testify, Monday, Tuesday, Wednesday, two and a half  
20 days. But believe me, it will be three, maybe  
21 four.

22 A. Okay, I trust you.

23 Q. He has actually watched you for two and a  
24 half, going on three, maybe four days testifying.  
25 Am I correct or am I incorrect?

26 A. He's been here the whole length that I have  
27 been here.

28 Q. And you said he is a very high scientist at  
29 Reynolds?

30 A. That's correct.

31 Q. Sir, shouldn't he be back at Reynolds trying  
32 to design a safer cigarette instead of watching you

20174

1 testify?

2 A. He's not a cigarette designer.

3 Q. Well, shouldn't he be doing something other  
4 than sitting in a courtroom for three days watching  
5 you testify, yes or no?

6 A. Are you suggesting he should be doing  
7 something productive?

8 Q. Absolutely, absolutely.

9 A. This particular individual works very hard,

10 is extremely productive and, you know, I don't have  
11 an issue with him sitting here watching the  
12 proceedings of this trial.

13 Q. So it's your call to bring him here?

14 A. It is my call.

15 Q. Do you think your stockholders would like the  
16 fact that an extremely productive scientist is  
17 sitting in a courtroom in Louisiana when he should  
18 be doing his work in North Carolina?

19 MR. BELASIC:

20 Objection, relevance, speculation.

21 THE COURT:

22 Sustained. Don't answer that  
23 question.

24 The jury will disregard the question  
25 and not speculate what the answer might  
26 have been.

27 Next question, please?

28 BY MR. BENCOMO:

29 Q. Sir, do you remember when I had asked you  
30 about epidemiology, and I believe your response was  
31 that the main basis for linking risks to cancer is  
32 epidemiology. Do you remember that?

20175

1 A. I remember questions along those lines. I  
2 don't remember phrasing it exactly that way.  
3 Certainly risk is defined by epidemiology.

4 Q. Okay. And then we also asked you whether or  
5 not you had any in-house, and you said you didn't.

6 And then Mr. Belasic came back and said, But  
7 you have or we have statisticians on the payroll.  
8 Do you remember that?

9 A. Yes.

10 Q. Okay. Sir, just to make sure that there is  
11 no misunderstanding on the jury's part, do  
12 statisticians do the job of epidemiologists, yes or  
13 no?

14 A. No, not exactly. Epidemiology is a branch of  
15 statistics.

16 Most statisticians, while they understand the  
17 approaches, the statistics, the science of  
18 epidemiology, don't actually practice epidemiology.

19 But certainly statisticians can interpret,  
20 understand, and even communicate with  
21 epidemiologists from outside of Reynolds, which are  
22 things that we all do.

23 Q. Have you ever directed any of your  
24 statisticians to talk to outside epidemiologists to  
25 decipher and understand and interpret the  
26 information that the epidemiologists have come up  
27 with and answer a very simple question: Does  
28 smoking cause lung cancer? Have you ever directed  
29 any of your statisticians to do that?

30 A. No, I have not. And the reason is because  
31 epidemiology cannot prove causation.

32 So going to an epidemiologist and say, Look,

20176

1 the epidemiology shows powerful risks for cigarette  
2 smoking, and that leads the epidemiologist to a  
3 conclusion that smoking causes cancer, that's not  
4 the right type of scientist to go to.

5 Q. Well, who is the right type of scientist to  
6 go to?

7 A. Well, certainly biological and toxicologists  
8 are the people who are pushing, pushing at the  
9 forefront of science and trying to define that  
10 mechanism, trying to identify an animal test that  
11 will be consistent with the idea that cigarette  
12 smoking causes cancer. It's those types of people.

13 Q. Are you saying that that hasn't been done  
14 yet?

15 A. Which part?

16 Q. Well, the part that you said they are trying  
17 to identify the cause of cancer through cigarette  
18 smoking. Are you saying that hasn't been done yet?

19 A. Absolutely.

20 Q. It hasn't been done yet?

21 A. The cause of cancer, the mechanism of how  
22 cancer develops is not defined.

23 And I have got to tell you that science,  
24 biological science is moving very fast in the  
25 direction of defining how tumors form and how cancer  
26 begins, and it's ultimately going to be genetic  
27 based.

28 Genetics research will show how cancer  
29 develops and why it develops and ultimately may lead  
30 to clear proof that cigarette smoking causes cancer.

31 Q. So as we sit here today, you cannot bring  
32 yourself, either individually or on behalf of your

20177

1 company, to say: Smoking causes lung cancer. Fair  
2 enough, yes or no?

3 A. No. In a strict scientific approach -- which  
4 is the approach that I take, a scientific  
5 approach -- cigarette smoking is an extremely strong  
6 risk, no question about it.

7 But we don't know how cigarette smoking could  
8 cause cancer. What are the changes inside the body  
9 that ultimately could lead to cancer, what is that  
10 mechanism?

11 And by the way, we don't have an animal test  
12 that shows lung cancer development on inhalation.  
13 That needs to be done and, as I have already  
14 testified, R. J. Reynolds is working very hard to  
15 try to develop such a test.

16 Q. Your answer would be the same then for the  
17 question about smoking causing COPD; correct?

18 A. Again, that's correct.

19 Q. Yes or no?

20 A. That's correct. It's clear that cigarette  
21 smoking is a strong risk for COPD, chronic  
22 obstructive pulmonary disease, no question about  
23 it. But how that could happen, what the mechanism  
24 is, nobody knows.

25 In the case of COPD, we believe that  
26 irritation can be very important. Irritation from  
27 compounds like aldehydes, compounds that we have  
28 gone after to try to reduce or eliminate.

29 Q. You cannot bring yourself, either  
30 individually or on behalf of your company, to say  
31 smoking causes emphysema -- smoking causes  
32 emphysema, three words, not even four -- yes or no?

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1 A. No. Again, it is the same answer. Science  
2 is moving in that direction, but from a strict  
3 scientific point of view, I cannot conclude that as

4 a scientist.

5 The rest of the world has. The public health  
6 community has concluded that. But from a strict  
7 scientific point of view, I can't conclude that  
8 until we have a mechanism and an animal model.

9 Q. I know I'm closer to you today than I was the  
10 other day when I couldn't really hear you about the  
11 billion with a B.

12 Did you say the rest of the world has  
13 concluded that, though? Is that what you said?

14 A. I think most --

15 Q. Yes or no.

16 A. I said that. And I think most scientists in  
17 the world have taken the epidemiology, and certainly  
18 the public health community has taken the  
19 epidemiology and has said because that epidemiology  
20 is so strong, cigarette smoking probably causes  
21 cancer.

22 Q. Well, probably? You see, you put a word in  
23 there that I don't think the rest of the world has  
24 put in.

25 A. Okay, fair enough. I think people have  
26 looked at epidemiology and said that is sufficient  
27 to decide that cigarette smoking causes cancer.  
28 Okay?

29 Q. You said it, but not in your own behalf?

30 A. The epidemiology, and even epidemiologists  
31 will tell you, that that is insufficient to prove  
32 cause. You must know the mechanism, you need to

20179

1 have an animal model.

2 And frankly, if we get to the point where we  
3 do know the mechanism, I think that's powerful.  
4 Because then scientists like myself and my staff at  
5 Reynolds will know how cigarette smoking causes  
6 cancer, we will know what in cigarette smoke is  
7 responsible. And that will make our job easier for  
8 making safer cigarettes.

9 Q. And then you also cannot bring yourself to  
10 say smoking causes bladder cancer; correct?

11 A. Again, the same answer.

12 Q. Same thing for your company?

13 A. Same answer.

14 Q. Thank you very much.

15 Now, sir, and we are going to get into it  
16 also a little bit more later on, but you talked  
17 about the fact that during the Eclipse, which I  
18 believe you said is still in the test market stage;  
19 is that correct?

20 A. It's finishing test market. We are rolling  
21 it out nationally in selected outlets, convenience  
22 store outlets.

23 Q. But isn't it a fact, sir, that this cigarette  
24 has been in a test market for seven years now?

25 A. It was first put in test market in  
26 Chattanooga in 1996.

27 Q. So we are in 2003, seven years?

28 A. Okay.

29 Q. Fair enough?

30 A. That's close.

31 Q. You told the jury that you conducted some  
32 testing, and as a matter of fact you conducted --

20180

1 you determined that there was a reduction in urine  
2 mutagenicity. Is that not correct?  
3 A. That's right.  
4 Q. And I wrote that down because I found that  
5 all of the sudden a little light bulb went off.  
6 What exactly is urine mutagenicity?  
7 A. It's a test that we conduct at Reynolds,  
8 other scientists have conducted, and essentially you  
9 collect urine from subjects, from smokers, who  
10 switch from tobacco-burning cigarettes to Eclipse or  
11 Premier or whatever, to a different cigarette.  
12 And you collect urine before they switch and  
13 after they switch, and then you compare the  
14 mutagenicity of that urine by the Ames mutagenicity  
15 test, which is a biological measure; okay?  
16 What that result means is that if one sees a  
17 reduction in urine mutagenicity, the mutagenic  
18 activity of the urine, what that means is that  
19 smoker is exposed to fewer mutagens, fewer compounds  
20 that cause mutations in DNA material.  
21 Q. That could ultimately cause cancer?  
22 A. Can be involved in the causation of cancer,  
23 yes.  
24 Q. Well, my follow-up question then, sir, is how  
25 often have you conducted these urine mutagenicity  
26 studies on these subjects?  
27 A. Well, actually there are different subjects  
28 for different experiments.  
29 But to answer your question, we have  
30 conducted I think three or four for Eclipse, we  
31 conducted a couple for Premier.  
32 Q. Well, I guess what I'm trying to find out, if

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1 you don't mind helping me with this because I don't  
2 know anything about it, is can we call one  
3 individual, one human being, a subject? I mean, is  
4 that fair enough?  
5 A. That's what I would agree to.  
6 Q. Is that individual given one urine test or is  
7 he given urine tests over a period of time?  
8 A. No, no. We make this a very scientifically  
9 rigorous test.  
10 What we do is have many subjects, first of  
11 all. They are put on a controlled diet. Because it  
12 turns out that diet, particularly if you eat foods  
13 that are fried, exposed to very high temperature,  
14 they generate a lot of mutagens, which causes your  
15 urine mutagenicity to be very high.  
16 So we put all these subjects on an extended  
17 bland diet -- and it's really not a very good diet,  
18 I don't think, but it's baked chicken and a lot of  
19 vegetables and no fried or meat that's cooked at  
20 high temperatures -- to make sure that the results  
21 are not obscured by their diet; okay?  
22 Then we have people smoke their usual brand,  
23 their tobacco-burning brand, for a period, usually  
24 several weeks, and in between they are collecting  
25 daily total urine samples.  
26 So they collect all the urine and return --  
27 and bring it to Reynolds. We analyze it.  
28 And then at the end of that period, we switch  
29 them to Eclipse, and they smoke only Eclipse again  
30 for a several-week period, continuing on this

31 special diet, and they collect all their urine. And  
32 we analyze that.

20182

1 Then comparing the analysis of Ames  
2 mutagenicity, which is that biological test, we  
3 compare the relative magnitude of the mutagenic  
4 activity.

5 Q. So one subject, one individual of the  
6 thousands or whatever that is a part of this  
7 particular study, let's say that he has his urine  
8 tested before the Eclipse for a two-week period,  
9 that's fourteen days; is that correct?

10 A. Right.

11 Q. And then you said, what, a two-week period  
12 while he's smoking the Eclipse?

13 A. At least two weeks.

14 Q. At least two weeks, so maybe more than that.  
15 But let's say for thirty days, is that a fair amount  
16 of days to give to the jury?

17 A. Okay, that's fair.

18 Q. I don't want -- you are the one testifying,  
19 I'm not.

20 A. It's a long experiment.

21 Q. It's a long experiment.

22 And so they are monitored for thirty days; is  
23 that correct?

24 A. The urine is collected for that period.

25 Q. Now, sir, you are here through your company  
26 to tell this jury not to give the members of this  
27 class one or two NMP-22 tests which check the urine  
28 of the smokers for bladder cancer?

29 MR. BELASIC:

30 Objection, argumentative.

31 BY MR. BENCOMO:

32 Q. Is that not correct, sir?

20183

1 THE COURT:

2 Overruled. Answer the question, if  
3 you are able to.

4 A. No, that's not correct. I'm not here to tell  
5 the jury anything about monitoring. I am here to  
6 talk about the product design work and development  
7 work that we have conducted, including the tests of  
8 cigarettes that we have conducted.

9 Q. Well, that's fair enough. But what you have  
10 told the jury, though, is that you believe it's  
11 important enough to give your subjects at least  
12 thirty days' worth of urine tests for having smoked  
13 over a thirty-day period, a test a day? Is that  
14 fair enough? That's what you said, yes or no?

15 A. Yes, basically. What I have said is that's  
16 the protocol in collecting information that compares  
17 one cigarette, the tobacco-burning cigarette, with  
18 say Eclipse or Premier, to see what kind of  
19 differences there are.

20 Q. You also testified in response to  
21 Mr. Belasic's questions that when designing  
22 cigarettes, you assume as a designer, as a  
23 manufacturer of a commercial product, that your  
24 product causes cancer and other diseases. Is that  
25 not correct?

26 A. Yes.

27 Q. And that is the basis for everything



28 revolving around the design of the cigarette?  
29 A. Yes. You must assume, you must assume that  
30 cigarette smoking causes cancer to try to figure out  
31 how to reduce it.  
32 Q. Okay. And that goes back to the 1950s. Is  
20184

1 that not correct?

2 A. Yes.

3 Q. During the 1950s and the '60s, did you ever  
4 tell any of your customers, By the way, we are  
5 selling these cigarettes that we manufacture, that  
6 we have designed, with the assumption that they  
7 cause cancer and other diseases? Yes or no?

8 A. Is your question did we tell consumers that  
9 specifically?

10 Q. Yes, sir.

11 A. No.

12 Q. Do you have any documents to show to this  
13 jury that you communicated as a matter of company  
14 policy to your customers the fact that you assumed  
15 that cigarette smoking causes cancer and other  
16 diseases?

17 A. I'm not aware of a case where we have told  
18 consumers that our product development philosophy or  
19 product development standard is that we assume  
20 cigarette smoking causes cancer and that, oh, by the  
21 way, we are looking at ways to reduce those risks.

22 Q. Now, I believe you told Mr. Belasic that you  
23 started smoking at age 27?

24 A. That's about right.

25 Q. And quite frankly, I objected. It was my  
26 mistake, the Judge overruled me because I didn't  
27 think it was relevant. You live in North Carolina.

28 But I want to follow up with some questions  
29 along those lines.

30 MR. BELASIC:

31 Object to the predicate, Your Honor.

32 THE COURT:

20185

1 Sustained.

2 MR. BENCOMO:

3 I will ask my question, Your Honor.

4 BY MR. BENCOMO:

5 Q. How long have you been smoking, sir?

6 A. Since I was about 27.

7 Q. And forgive me, if you were a lady I wouldn't  
8 ask, but how old are you?

9 A. 55.

10 Q. You are 55. So you have been smoking now for  
11 28 years?

12 A. Approximately.

13 Q. And which brand did you begin smoking at age  
14 27?

15 A. I didn't smoke much. I think I started with  
16 True.

17 Q. And when you say you didn't smoke much, I  
18 don't know what that means in relative terms. Can  
19 you share that with the jury?

20 A. Well, I don't recall exactly. If I had to  
21 guess, I would say probably maybe up to a half a  
22 pack a day, something like that, of True, which was  
23 a low tar cigarette.

24 Q. And at the time that you started smoking,

25 where were you in relation to either being with or  
26 not with Reynolds?  
27 A. I was not with Reynolds.  
28 Q. Okay. And then how long did you smoke True?  
29 A. I don't really recall.  
30 Q. Well, do you remember what the next brand was  
31 that you started smoking?  
32 A. No, I really don't. I think I switched

20186

1 around a lot, so I'm not sure that I would say,  
2 yeah, this is definitely the brand I stuck with.  
3 Q. Okay. And can you remember maybe within the  
4 last ten years, since you have been testifying or  
5 thereabouts, what it is that you have been smoking?  
6 A. Yeah, over the last ten years I know very  
7 well. I smoke Salem Ultralight and Eclipse.  
8 Q. You smoke both, or you mean you smoked Salem  
9 Ultralight at one point and now Eclipse?  
10 A. No, I actually switch. On occasion I will  
11 smoke a Salem Ultralight, and then throughout most  
12 of the day I will smoke Eclipse. I smoke more  
13 Eclipse than I do Salem Ultralight.  
14 Q. Now, sir, other than people bumming a  
15 cigarette -- you have heard that term before?  
16 A. Sure.  
17 Q. Isn't it a fact that most people just kind of  
18 smoke one brand and -- unless they switch to another  
19 brand, but basically they don't do what you do,  
20 which is smoke one and then another one?  
21 A. I think that's basically correct. You know,  
22 there are times when people go to a store and their  
23 brand is not present, and so they will have to then  
24 decide am I going to choose something different.  
25 Q. And that's not of course what I'm asking.  
26 I'm asking a question -- and I think you understood  
27 it. So my question is why do you do that?  
28 A. Why do I switch around?  
29 Q. Yes.  
30 A. I have no idea, but I do.  
31 Now, in the case of the switching between  
32 Salem Ultralight and Eclipse, I happen to like

20187

1 Eclipse, I happen to like Salem Ultralight, they are  
2 very different. I just choose to do both.  
3 Q. And how much do you currently smoke?  
4 A. Well, that depends very much on what I'm  
5 doing. I mean, sometimes on the weekend at home I  
6 may not smoke much or even any. I can go a full day  
7 on Saturday, for example, working in my yard and  
8 really not smoke.  
9 At work, I tend to smoke more when I'm  
10 sitting at my desk reading and doing things like  
11 that. I would say typically in a day, I will  
12 smoke -- this is typically -- I would smoke maybe a  
13 quarter of a pack to a half a pack of Salem and  
14 maybe a pack of Eclipse.  
15 Q. And is when you are testifying in court one  
16 of those periods where you tend to kind of spike it  
17 up?  
18 A. Absolutely.  
19 Q. The jury, I think, is very aware now of what  
20 your position and your company's position is when it  
21 comes to smoking and health. I would like to ask

22 you another question which deals just with you.  
23 Can you tell this jury, not what your  
24 position is, not what your company's position is,  
25 but what your belief is, what your belief is as to  
26 whether or not smoking causes lung cancer, yes or  
27 no?

28 A. Well, I don't think you asked a yes or no  
29 question. I can answer the question, though.

30 Q. Please.

31 A. My personal belief about whether smoking  
32 causes cancer is I think it's more likely that it  
20188

1 does than doesn't.

2 I think from a scientific point of view,  
3 which is what I tried to make clear, I think there  
4 is a lot of evidence that suggests it probably  
5 does. I don't think the scientific evidence is  
6 complete.

7 If you take the weight of the evidence  
8 together and you look at it, I think ultimately it's  
9 more probable that it does than doesn't.

10 And I do think that science will get to the  
11 rigorous scientific answer, and I think the key  
12 thrust will be through genetics research.

13 Q. Thank you.

14 Now, knowing what your belief is about that,  
15 do you believe that because you are smoking and  
16 continue to smoke, that you will contract lung  
17 cancer, yes or no?

18 A. I don't know the answer to that.

19 Certainly I am engaging in something that  
20 poses a serious risk, there is no question about it,  
21 and it's a choice that I have made.

22 There are other choices that I make on one  
23 side or the other. For example, eating a high fat  
24 diet, that's highly statistically related to --

25 MR. BENCOMO:

26 Your Honor, excuse me, if I may --

27 MR. GAY:

28 Objection.

29 MR. BENCOMO:

30 -- I move to strike on the basis

31 that the witness --

32 THE COURT:

20189

1 Come up.

2 (At sidebar:)

3 THE COURT:

4 I think I know what you are going to  
5 say. It goes far beyond --

6 MR. BENCOMO:

7 It goes way beyond.

8 THE COURT:

9 -- the answer to that question. He  
10 asked him if he was going to contract lung  
11 cancer, now he's talking about a high fat  
12 diet. It's not responsive.

13 MR. BENCOMO:

14 I mean, it's ridiculous. I agree one  
15 thousand percent, thank you.

16 MR. GAY:

17 He asked him a very broad question.

18 MR. BENCOMO:

19 No, I didn't.  
20 THE COURT:  
21 No, he didn't. Come read the  
22 question. Come read the question.  
23 MR. GAY:  
24 Okay.  
25 MR. BENCOMO:  
26 Can I ask him the question again?  
27 (In open court:)  
28 THE COURT:  
29 The objection that your answer went  
30 beyond a response to the question that was  
31 asked is sustained. Please keep your  
32 answers relevant to the inquiry, Doctor.

20190

1 THE WITNESS:  
2 Yes, Your Honor.  
3 THE COURT:  
4 Next question, please?  
5 BY MR. BENCOMO:  
6 Q. Do you believe, sir, that your smoking will  
7 ultimately cause emphysema, yes or no?  
8 A. In me specifically?  
9 Q. Yes. I mean, you are the only one  
10 testifying.  
11 A. Well, I'm just trying to make sure I  
12 understand your question.  
13 Q. Believe me, every question I ask will be of  
14 you, no one else.  
15 A. I just need to understand your question.  
16 If you are asking about me specifically, I  
17 don't know the answer to that. No one knows  
18 whether, while they are presenting themselves a  
19 great risk by smoking, by choosing to smoke, nobody  
20 knows whether they are going to contract lung  
21 cancer, emphysema or any other chronic disease.  
22 Q. Do you believe that you will contract bladder  
23 cancer as a result of your smoking, yes or no?  
24 A. It's exactly the same answer.  
25 Q. Do you recall yesterday when you testified  
26 and told this jury on a number of occasions that the  
27 public health community had attacked, for instance,  
28 the Premier cigarette, do you remember that?  
29 A. I remember that discussion.  
30 Q. Is it not your opinion, sir, that the public  
31 health community is not a friend of the tobacco  
32 industry?

20191

1 A. I don't agree with that question exactly the  
2 way you have stated it.  
3 I would say most of the people in the public  
4 health community are not friends of the industry.  
5 There are some people in the public health community  
6 who are continuing to try to encourage the  
7 development of reduced risk cigarettes. They are  
8 not the majority, I will tell you.  
9 Q. So that's exactly my point. So if you had to  
10 say anything to this jury, you would say: Yes,  
11 there are some stray cats, if you will, but the  
12 majority of the public health community is not a  
13 friend of my industry. Is that not correct?  
14 A. I think I have answered that question.  
15 Q. Yes or no?

16 A. Not exactly the way you have said it. I  
17 didn't talk about stray cats. I said the  
18 majority --  
19 Q. That was my term, you are right.  
20 A. I know.  
21 I said the majority of people in the public  
22 health community are certainly not friends of the  
23 tobacco industry. I believe also that their goal is  
24 cessation or getting everybody to quit smoking.  
25 I do believe that there are some people in  
26 the public health community who continue to believe  
27 that reducing the risks of smoking, making safer  
28 cigarettes, is an important direction to take in  
29 addition to getting as many people as possible to  
30 quit.  
31 Q. Sir, do you recall when Mr. Belasic was  
32 asking you questions about general reduction

20192

1 techniques and he asked you whether or not you could  
2 design a filter that would remove all the tar, but  
3 that such a filter is not acceptable? Do you  
4 remember that?

5 A. I remember him asking a question about  
6 removing all of the tar.

7 Q. Okay. And is it possible to design a filter  
8 that will remove all of the tar that is acceptable?

9 A. That is consumer acceptable?

10 Q. Yes.

11 A. We don't know how to do that.

12 Q. Okay. And that's what I thought you said  
13 yesterday.

14 And then you analogized it to it's like I  
15 believe you said -- correct me if I'm wrong --  
16 sucking or trying to drink a milkshake through a  
17 small straw. Do you remember that?

18 A. I remember discussing that. I think you have  
19 touched on only part of my answer, however.

20 Q. But that's the part that I want to touch on.

21 A. Okay.

22 Q. You said it's like sucking a shake through a  
23 small straw; correct?

24 A. I said something along those lines in  
25 reference to if one devises a filter that completely  
26 removes particles, all the particles from smoke,  
27 then the pressure drop or how hard it is to draw  
28 through that filter becomes very high. It's very  
29 difficult to draw.

30 Q. Exactly?

31 A. And I used the milkshake analogy to try to  
32 make that clear.

20193

1 Q. Okay. And so when that happens, when you say  
2 it causes the pressure to drop, a person who is  
3 trying to suck that shake through that narrow straw  
4 has trouble, do they not?

5 A. Yes. It takes more energy.

6 Q. It takes more energy. And sometimes you just  
7 can't get anything?

8 A. Sometimes.

9 Q. And that's happened to you?

10 A. Absolutely.

11 Q. And it's probably happened to many of the  
12 jurors.

13 Sir, are you aware of the fact that that  
14 feeling is the feeling that someone who smokes and  
15 has emphysema has? Are you aware of that?  
16 A. I don't know that.  
17 Q. On the issue of reconstituted tobacco, you  
18 answered some questions about the process, and I  
19 would like to follow up on that if I may.  
20 MR. BENCOMO:  
21 And would you be kind enough to pull  
22 up the defendants' demonstrative I believe  
23 it's DDA-620?  
24 Your Honor, may we publish? That was  
25 shown yesterday to the jury.  
26 THE COURT:  
27 You may publish.  
28 MR. BENCOMO:  
29 Thank you, Your Honor.  
30 BY MR. BENCOMO:  
31 Q. And that was a chart, and the source is  
32 Dr. David E. Townsend on the bottom left-hand  
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1 corner. Is that that not correct?  
2 A. That's right.  
3 Q. So you are the one who designed that chart?  
4 A. I'm the one that laid it out and asked that  
5 it be produced in this way.  
6 Q. Believe me, I couldn't do it, but what I'm  
7 saying is it's your layout, if you will?  
8 A. Yes.  
9 Q. And you talked about how the process works,  
10 and I just want to make sure because you have  
11 continuously told the jury about how complicated a  
12 lot of these processes are.  
13 And I will be the first to acknowledge to you  
14 that I probably went to law school because I didn't  
15 want to be a chemist, and you probably went to be a  
16 chemist because you didn't want to be a lawyer.  
17 MR. BELASIC:  
18 Object to the speech, Your Honor.  
19 MR. BENCOMO:  
20 Your Honor, I will ask the question.  
21 THE COURT:  
22 Ask the witness a question, if you  
23 would like to, Mr. Bencomo.  
24 MR. BENCOMO:  
25 Yes, Your Honor.  
26 BY MR. BENCOMO:  
27 Q. On that process to manufacture the  
28 reconstituted tobacco, you said it was a way, a way  
29 for the cigarette companies, that's how it was  
30 initially designed, to make money because they could  
31 save all of the droppings, let's say, that go  
32 into -- that don't quite make it into the process.  
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1 Is that a fair statement?  
2 A. In general that's right. I didn't use the  
3 word droppings.  
4 Q. That's my word, I apologize.  
5 A. I talked about small particles from the  
6 stemming operation that were too small to be made  
7 into cigarettes.  
8 That was the original purpose for  
9 reconstituted tobacco, however, was to save money.

10 Q. And it is still used today?  
11 A. Yes, in large part, because what we found was  
12 that it is a way to reduce tar and nicotine yields  
13 and the biological activity, the tumourigenic  
14 activity of the smoke is less. So it is used today.  
15 Q. You still save money?  
16 A. Yes, it still saves some money.  
17 Q. Now, you have on the upper right-hand corner  
18 or towards the upper right-hand corner where it says  
19 water soluble removed, do you see that?  
20 A. Yes, of course.  
21 Q. What do you call that tank or whatever that  
22 is? Right below where the words "water soluble  
23 removed" appear.  
24 A. You mean what do we call what's in the tank?  
25 Q. No, what do you call the tank? Does the tank  
26 have a name? Holding tank, vat, I don't care.  
27 A. I think most people would call it an extract  
28 tank.  
29 Q. In the extract tank there is some matter that  
30 eventually goes down that pipe, and you have like  
31 blue drops that normally signify water going back  
32 into the reconstituted tobacco process. Is that not

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1 correct?  
2 A. That's right. However we do use spray  
3 nozzles at that point.  
4 Q. Okay. First of all, those blue drops that  
5 usually signify water, that's not water that's going  
6 down, is it? I mean, it's not blue like that, is  
7 it?  
8 A. No, I wasn't trying to suggest that it was  
9 blue. All I was trying to do is show that it's  
10 reapplied at that point.  
11 The extract itself is actually a brown  
12 color. The water extract removes solubles, anything  
13 that's soluble in water including a lot of flavors,  
14 sugars and also some nicotine.  
15 Q. You could have colored the drops brown,  
16 couldn't you? You have brown throughout the thing.  
17 A. I could have. It would have been harder to  
18 see when it overlaps with the brown tobacco. But I  
19 suppose I could have, sure.  
20 Q. Okay. Now, that so-called water soluble  
21 that's going down or whatever is going down in those  
22 drops that are brown, that's nicotine, isn't it?  
23 A. It includes some nicotine. But there are  
24 many, many other compounds in there. There are  
25 hundreds of compounds in a water extract, including  
26 sugars, water soluble acids, and a number of other  
27 things.  
28 Q. How much of the nicotine is removed during  
29 the reconstituted tobacco process?  
30 A. Most of it. Certainly in the 90 plus  
31 percent.  
32 Q. And you are saying that you only put back 10

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1 percent?  
2 A. No, we put it all back.  
3 Q. You put it all back.  
4 A. I thought you were asking me the question how  
5 much is removed from the tobacco that you start  
6 with.

7 Q. I just didn't want you to leave this jury  
8 with the impression that somehow or another you have  
9 removed the tobacco and it had disappeared. You put  
10 it all back in the process; correct?

11 MR. LOUIS GERTLER:

12 Nicotine.

13 BY MR. BENCOMO:

14 Q. I mean nicotine, I'm sorry.

15 A. Well, I don't want the jury leaving with the  
16 wrong impression either.

17 I think when I first talked about this, I  
18 talked about removing it and putting it all back.

19 Q. Now, if you wanted to, if you wanted to  
20 reduce the nicotine in that particular process, that  
21 pipe instead of going down could go out into some  
22 kind of just waste area. You don't have to put it  
23 back, do you?

24 A. No, you don't have to put it back. And I  
25 think I testified to that yesterday, that you can  
26 make a paper sheet without reapplying the extract.  
27 In fact, I even passed a sample through the jury.

28 But that particular material is not a good  
29 tobacco material because you haven't reapplied all  
30 those flavorful compounds and the nicotine and  
31 everything else.

32 MR. BENCOMO:

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1 Dr. Townsend, thank you very much. I  
2 think it's time, according to the Court,  
3 for our noon break. Thank you.

4 THE COURT:

5 We will take our luncheon recess at  
6 this point, ladies and gentlemen, until  
7 1:30 by the wall clock.

8 (In open court without a jury  
9 present:)

10 THE COURT:

11 Let the record reflect that the jury  
12 has left the courtroom.

13 Anything for the record by plaintiffs  
14 counsel?

15 MR. BENCOMO:

16 No, Your Honor.

17 THE COURT:

18 Anything for the record by defense  
19 counsel?

20 MR. WITTMANN:

21 No, Your Honor.

22 THE COURT:

23 We will reconvene at 1:15 to hear the  
24 motion in limine.

25 MR. RUSS HERMAN:

26 Your Honor, I need a phone number  
27 where I can get you or your clerk or  
28 Mr. Gianna?

29 THE COURT:

30 561-9312.

31 MR. GAY:

32 I will be here. I will be upstairs.

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1 THE COURT:

2 Mr. Gianna will be in the building.

3 (Whereupon, the hearing adjourns at



4 12:02 p.m.)  
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1 REPORTER'S CERTIFICATE  
2

3 I, NICHOLAS A. MARRONE, CCR, Registered  
4 Merit Reporter, do hereby certify that the foregoing  
5 proceedings were reported by me in shorthand and  
6 transcribed under my personal direction and  
7 supervision, and is a true and correct transcript,  
8 to the best of my ability and understanding.

9 That I am not of counsel, not related to  
10 counsel or the parties hereto, and not in any way  
11 interested in the outcome of this matter.  
12  
13

14 \_\_\_\_\_  
NICHOLAS A. MARRONE (CCR 21011)  
CERTIFIED COURT REPORTER  
REGISTERED MERIT REPORTER  
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